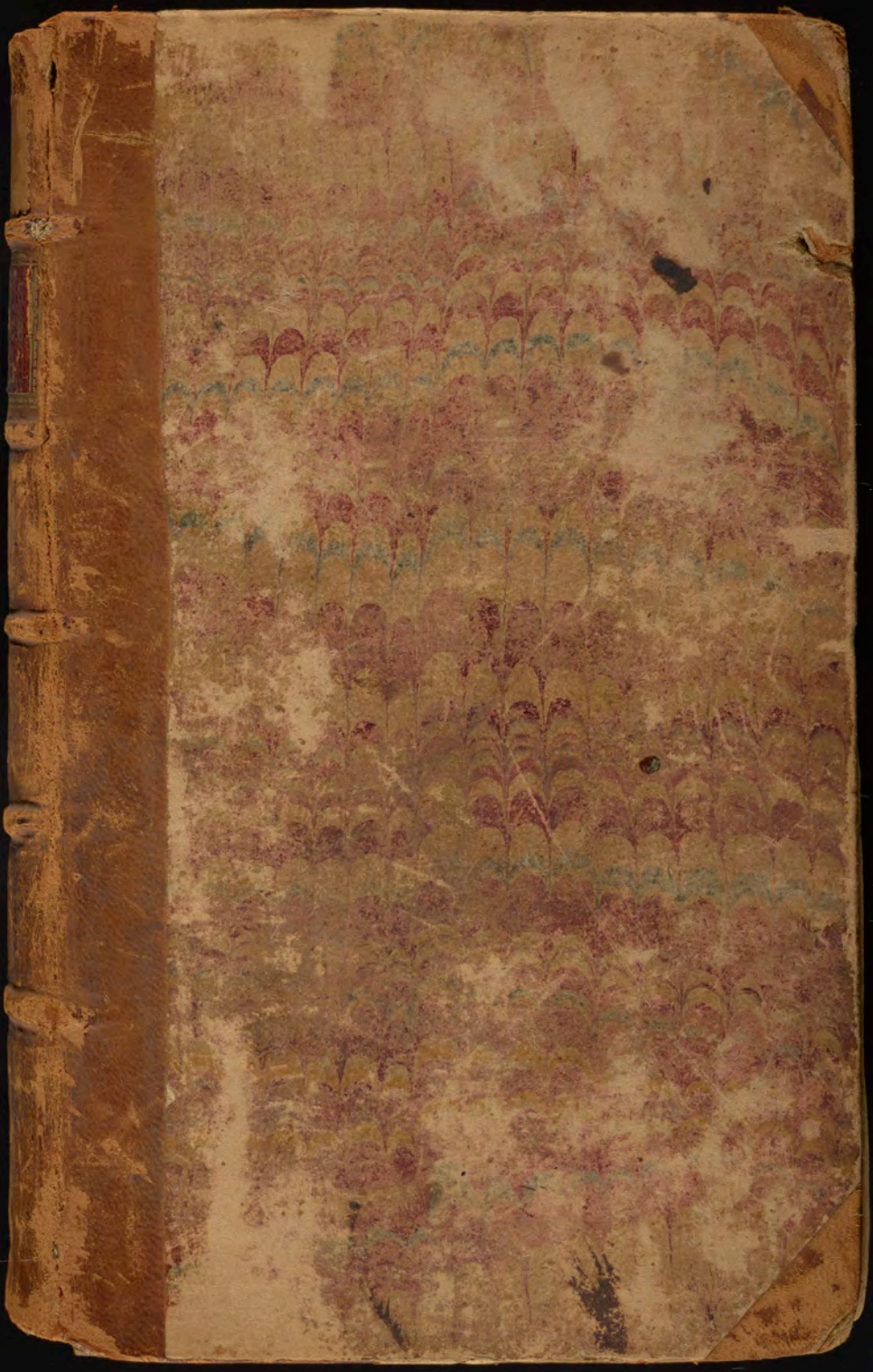

Notes of Dr Cullen's
Lectures on the Practice
of Medicine, taken
by Benjamin Rush
at the University
of Edinburgh

J. R.
1852.

Methodus Medendi

The principal Remedy in ye Dysentery is 1st Emollies. they Operate by determining to the Surface. they do most service when they purge gently.

2nd: Purges are useful not to carry off morbific Matter but to remove the Scyballa wch: by irritating the great Gutts bring on the bloody mucous stools

3rd: Opiates are Absolutely necessary. they remove Spasms. but should be mixed wth: evacuating medicines. in the Beginning of the Dysentery some Inflamm: Determination take place to the Gutts. here Opiates are not so safe

still after Bleeding has been used.
- the Tubercles found lately in ye Intes=
=tines are the Consequence & not ye Cause
of the Disease, & therefore afford no
new Matter of Observation. —

This finishes the Class of the
Pyrexia. ——

Class II Neuroses

The Character of this Class is "Sensus "& Motus Affectiones sine Pyrexia "vel Vitio Organico".

Pyrexia sometimes attends some of the Neuroses but it is not Idiopathic & therefore it does not exclude them from this Class. I shall confine myself chiefly to the Affections of the Sensorium Commune. Most of ye Organic Affections are not properly Diseases of the Nervous System. this will lead us to limit the Nervous Diseases very greatly. for truly they were restricted only to the nervous Affections of ye Alimen.

Canal such as y^e Hysteria & Hypocondri=
=asis, but this was improper as I shall
explain to you hereafter.

I suppose you all acquainted
wth the Laws of the Nervous System deliv=
=ered in my Institutes of Physic.
the Nervous Diseases have not one
common Foundation like y^e Pyrexia.
- they are united only in their Seat
in one part of the System, & affect
always Sense & Motion wch are inseperably
connected in a Nosological Scheme of Lectures
- I shall proceed next to y^e Orders of our
Class

They are divided 1st into a weakness & 2nd an Irregularity in the Action of the various Functions of ye Body. — the 2nd may be divided into Diseases affecting 1 Motion & 2nd Sense which are the Spasmi & Vesania. the 1st likewise are divided into the Comata & Adynamia. this Division turns upon a precise Meaning of the word Sopor by wch I mean nothing but Sleep — a State in wch the Voluntary Motions & Sense are suspended. if part of the Senses remain the Disease belongs to the Adynamia ~~but~~ ~~if the~~

I shall now 1 enquire w: Genera the Comata comprehend. I shall refuse the Typhomania & Lethargus of Lauvauge as being only symptoms of Fever. w: shall we say of Ecstasis & Catalepsia? I have never seen these Diseases nor did I ever see any Body who did. I suspect there is some Inaccurate in the History of these Diseases, for my part I can say nothing new upon them, & I shall upon y Acct: leave them Out of our System. the different Genera of the Soporific Diseases may be distinguished by y Degrees

of Irritability. Thus a Somnolentia may be considered as the first Degree of the comatous Diseases, & admits of easy Excitement. the Apoplexy is the highest Degree of them as it is not to be excited from, till the Disease is perfectly cured. But there are many intermediate Degrees between these two. the Somnolentia may not always admit of Excitement easily, nor yet the Apoplexy always be proof against it. this is a Difficulty wh: embarrasses our System a little, but Difficulties of this kind occur in every part of Science. I shall therefore only

confine myself to these two Genera.
- I prefer the Term Somnolentia
to Cataphora viz: Sauvage employs
- Linnaus has subdivided this Genus
but without any propriety, & Sauvage has
subdivided the Apoplexy into two Genera
from the Presence or Absence of Stertor,
but this depends only upon a diffi:
-rence in Degree of the Symptoms of a Dis:
-ease depending on One & the same Cause.
Let us now consider the Theory of
these two Genera. I suppose you all
allow a Nervous power, or a Condition upon
viz: the motions occurring in my Nervous power

depend independ.t of the Other parts of the System. This I prove from its preexisting the Other parts of the System, & from its contributing to form y.e rest of the Body. What is y.e nature of this power? — from whence is it derived? what Analogies have we of it in Other parts of nature? all these questions are very curious & the solution of them might be useful, but they are of no great Consequence in our present System. I shall only assume a few Facts w.ch are else where demonstrated.

1 It is necessary, the nervous System in

order to act properly must be free from Compression.

2d: The nervous power may be in diffe:rent Degrees of Activity.

3d: The Sensorium likewise may be more or less excited, & therefore more or less fitted to perform its Functions. I have the word Excitement in speaking of the Sensorium by which I mean a certain State of vigour & Activity in the Sensorium. The different States of Sleeping & Waking are exemplified of this Excitement. There are various powers capable of inducing Sleep & thus destroy the

Excitement of the Sensorium. there are two Sett of Causes wch induce Sleep
1st Such as induce no Change in the Sensorium or nervous System. Obvious to our Senses, &
2nd: Such as act by Compression.
— the 1st: we do not understand the 2d: is Obvious to our Senses, ~~the~~ & is the most frequent Cause of Sleep. I shall therefore 1st enquire into those Diseases wch: depend on Compression they are of two kinds as arising from 1st External Violence breaking the Cranium or Inducing a Rupture of some Blood vessels, or 2nd

from Tumors formed in ye Cranium or from the Rupture of these Tumors or the Effusion of Fluids. the last of these Causes occurs ye most frequently, but ye Effusion is sometimes so small than we might almost refer the Disease produced, to the insensible Causes, or they perhaps act more immediately upon ye Medullary Substance of the Brain where they produce more deleterious Effects. what do Effusions depend on? - a Retardation of the venous Blood in the Brain gives a Resistance to ye Arterial Blood, &c

hence serous Exhalations happen w.h are most apt to stagnate in y.e Brain from its having no ~~Lymp~~ Absorbents ~~Glands~~ discovered in it or if ~~they~~ it has they are y.e Extremities of y.e veins w.h are so Obstructed that they cannot act. —

What Circumstances favour the ~~Lodg~~ Stagnation of Blood ~~tem~~ in the Brain? 1.st the proximity of the Heart - the Size of the Arteries, & the direct Course of y.e Blood. 2.nd the Structure of the Veins in y.e Brain is very peculiar. venous Sinuses are here provided in w.h y.e veins of y.e Brain emptying y.e Blood. these Sinuses are placed between y.e Lamella of y.e Dura Mater w.h compress

them in such a manner that they are less capable of dilating. they are likewise provided wth Ligaments wch prevent their stretching laterally. upon this acc^t: they often resist the Flux of Venous Blood into them, & when it is retard they push it more readily back again into the veins wch are most capable of giving way.

But further, the Blood is emptied into the Sinuses in a contrary Direction to wch the Blood is whilst flowing in ye Sinuses. add to this, they have a serpentine winding wch adds to ye Difficulty of ~~place~~ their emptying themselves. wch is the final Cause

(a) this Sh: lead us to avoid one Posture in Bed as much as possible, and to recommend the Change of Posture to those who are afflicted w: this Disease. —

of this Structure? perhaps it may be to prevent the Tension of ye Brain being too suddenly taken off wch w^d be the Case from the erected posture of the Body. the Incubus depends upon an Interruption of the Discharge of ye Blood into the Jugular veins. it is therefore a kind of Comata. it arises from the Head lying too low in bed. this, I infer from ye Jugular veins being most dilated on that side on wch were used to sleep. (a)

3rd the veins of the Brain want the Advantages of Muscular Compression to propel it along. this favours the Stagnation

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of Blood there. all these Causes Operate most 1st in Old Age when ye venous Plethora happens & 2nd in People who have large Heads in proportion to ye rest of the System, 3rd in those who have short necks. for the longer the neck the more Compression the veins have to forward the Blood to the Heart. 4th in People who are disposed to ye Hemorrhagic State or to an unusual Determination of Blood towards the Brain. I have seen a Suppression of the Hemorrhoids bring on all ye Symptoms wch threaten Apoplexy. 5th In People who have ye Descending

Aorta compressed such as Hydropic & pregnant patients. 6th in People who have usual Discharges dried up such as Issues Setons &c. 9 out of 10, Who are ~~bad~~ seized w.th Apoplexy are predisposed ~~from~~ to it from a Plethora of the Brain. a Man who is hanged dies of an Apoplexy. ~~Their opp~~ ~~are all very~~ If a Man stoops his Head for some time the Venous Blood is retarded. When he rises he is seized w.th a Vertigo, & many of the Symptoms of Apoplexy. All the Causes w.ch retard a Return of the Venous ~~of~~ Blood may

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produce Apoplexy. the most frequent Cause is an Obstruction of the Blood in the ~~Blood~~ Lungs. this is obvious to you to all. interrupted Inspiration determines the Blood powerfully to the Brain. the swelling of the Brain is exactly synchronous w: the Dilatation of the Lungs. this explains the Reason why Polypus of ye Heart may induce an Apoplexy, but I believe they are rather the Consequence than the Cause of Apoplexy.

In w: Manner is Apoplexy produced? either 1st by a Retardation of ye venous

Blood, or 2nd by a increased Afflux of the Arterial Blood wch may occasion a Rupture or Effusions in ye Brain. the Arterial System is easily increased to an unusual Action. they are liable to Congestions from ye Compression of the veins. this Congestion produces an increased Action of the Arteries wch induces the Hæmorhagic Efforts & hence ~~as~~ often terminate in an Effusion of Blood. this is the most frequent Cause of Apoplexy altho' it depends originally upon a venous Plethora. this Rupture of Blood is not always within ye Cranium

but vents itself in a Hæmorrhagia Naricum. I have seen many instances of Persons who were subject to a Bleeding of the Nose in ye Decline of Life when this Bleeding stopped, who have been seized wth Palsy or died Apoplectic.

wch has been said explains the Reason of all the Phænomena wch precede the Apoplexy. all the Causes wch induce Apoplexy operate by retarding the venous Blood or encreasing ye Influx of the Arterial. all the Cases of Apoplexy wch are of any Duration or are fatal, depend upon Effusion.

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when the Serum of y^e Blood only is poured out on y^e Surface of y^e Brain the Apoplexy is of a shorter Duration & attended wth less Danger. when the Effusion is made into y^e cortical part of the Brain there is more Danger, but still more Danger attends when the Effusion is made into the Ventricles of the Brain. the Danger will be influenced by the Quality of the Fluid effused. Halitus is least dangerous. red Blood most dangerous as it shows a Rupture to have happened, nor is it easily absorbed. in this

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Case it always proves suddenly fatal. – the Effusion of Serum only is cured by Nature, for ye Effusion takes off the Irritation wch indeed the Effusion, & the Compression of the Brain diminishes the Energy of it in such a Manner as to lessen the increased Action of the Arteries. like all Hæmorrhagic Congestions the Apoplexy becomes more violent by Repetition. I would not restrict it to occurring 3 times only. – I have seen Persons have many more Fits & those pretty violent Ones. the first Fit sometimes destroys some parts

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of the Brain wch: disposes them to return again.

But this is not the only form of Apoplexy. there is another depending upon the Laxity of the Arteries of the Brain wch: may occur from Resistance alone or a slight Degree of increased Action in the Arteries. this happens in Deopies, & must be explained from the common Laws of Hydraulics. When we see ~~Hep~~ Stupor or Heaviness joined wth: a Levelling of the Legs & Effusions in Other parts of the Body we may be confident the Brain

has serous effusion into it. the Hydrops Pectoris & Swelling of the Legs alternate wth each Other in a remarkable Manner & so does the Dropsy of the Head wth the Dropsy of the Breast. But there may be local Effusions confined in the Brain only, when no Other part of the System is affected. this may depend on a simple Laxity of the Arteries in the Brain. this Effusion in the Brain often arises from a Redundancy of Serum in the Blood induced by an Scirrhus Renalis. most of the Cases I have seen of the Scirrhus Renalis

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died Apoplectic. These kinds of Apoplexies I would choose to call the Hydropic Apoplexies. The One we treated off first I would call the Hamorrhagic Apoplexy. Is there any Foundation for the pituitous or phlegmatic Apoplexy of Sydenham? - I know of no Foundation for it. perhaps we may Call ye One that arises for the Superabundance of watery Fluids or laxity of the vessels by that name.

The Hamorrhagic Apoplexy

Diagnosis between the Hydropic & Hæmorrhagic Apoplexy. –

comes on suddenly. the Hydropic apoplexy more gradually & is attended w: Hydropic Affections in other parts of the Body. the 1: is accompanied w: Plethora the 2d: is not.

But both these Species arise from Compression. is there no Species of Apoplexy w: arises without Compression? I never read any Cases of Dissections of Apoplectic Patients where Effusions were not found. But there may be Cases of

Apoplexy depending on dimi-
nished Excitement wch are seldom
fatal, but wch at last induce Apo-
plexy from Compression. This kind
of Apoplexy attends the first Onset
of some Intermittents & the latter
Stage of continual Fevers, as also
Epilepsies & Hysteria sometimes.

Wch are the Causes of this Species of
Apoplexy? They are all ye Causes
wch induce Sleep operating in a higher
Degree than usual. They at least induce
a Somnolentia wch depend on a Want

of Excitement & not on Compression like Apoplexy. But Somnolentia is sometimes unexcitable, when this is the Case to wch of the General must it be referred? - I cannot tell - the Operation of certain Narcotics furnishes the only Example of this kind of Somnolentia. It is impossible to seperate them exactly either from their Causes or Symptoms. we must therefore recur to the Distinction we set out wth, depending on the Difference of Excitement.

But a further Distinction may be added. a deminished Excitement & therefore Somnolentia comes on more gradually as in the Operation of Cold, or Poisons. wh. leave the Patient for some time in an excitable State. But the Hydropic Apoplexy comes on ~~but~~ gradually too. it may however be distinguished by the Concurrence of other Hydropic Symptoms. The Causes of deminished Excitement

ordinarily prod Palsy of wch we shall speak hereafter.

What shall we say of ye species of Apoplexy wch follows a retrocedding Gout? – the most ordinary Consequence of a retrocedding Gout is Palsy wch it produces not by Effusion. this I conclude from its being removed by a Fitt of the Gout carrying it off. It must act then by demenishing Excitement, & the Fitt of the Gout must act by removing the Atonia of ye Brain

in the Apoplexy therefore I suppose the Excitement is taken off from the whole Brain ~~or~~ by ye retroceding Gout, or it may produce an Hydropic Apoplexy depending on laxity, or the Gout may induce an Inflammy: Determination & thus operates by Effusion or by an active Hemorrhage. - This is all I have to advance upon the proximate Cause of Apoplexy. let us next proceed to ye Method of Cure.

Method of Cure.

you will easily understand from w^h: has been said w^h: Apoplexies will be fatal & w^h: curable. When they arise from Tumor or Effusion of red Blood they are beyond the Reach of our Art, but it is hard to tell when these Cases happen.

we must therefore always proceed upon the Lucky position of its depending upon a small Effusion & endeavour to relieve it by Bleeding. This being

& Glysters. Many Disputes have been entertained concerning Bleeding from ye Theory of Phlegmatic & Sanguineous Apoplexy but this is all without any Reason. in all Cases of sudden Apoplexy we must use it. if Arteriotomy has any Advantages over venesection it must be used here in the temporal Artery. if we perceive one Side of the Body more easily excited than the Other we should by all Means bleed on that Side. I have the Authority of Valsalva

& Morganni for this Observation.

To this Evacuation we must add the Antiphlogistic Regimen as in Other Hæmorrhages. it is an absurd & strange Practice among Physicians to join Venæsection & the Stimulat.^g Regimen together in the Apoplexy.

Morganni will not suffer a smelling Bottle to come near a Patient in ~~any~~ an Apoplexy. in a^d Hydropic Apoplexy Bleeding may do Harm, & Stimulants may be useful, but even here they can do Service only as

Evacuants. Stimulants are safe
1st when we are sure ye Apoplexy
arises from diminished Excitement
wch we may know from no Violence
or predisposition to Apoplexy having
preceded it. & 2nd When the Apo-
-plexy seems relieved & threatens
to be changed into Palsy wch produces
a diminished Excitement & does
not act simply by Compression. in
this Case Stimulants may be useful.
— to sum up this Subject I will

Observe that altho' we cannot cure Apoplexy yet we have it in our power to prevent it when it depends upon Plethora by the same means as we obviate Hemorrhage, by Exercise - Spare Diet &c. I have recommended this Conduct to some People whom I suspected to be disposed to Apoplexy, & they have arrived at a good old age by means of it.

I said formerly that Gestation was the best kind of Exercise in the Hemorrhoids - Hemorrhoids & Menorrogia, but

I shall here bring in ye Suppression of the Menses. the Absence of the Menses is a positive Disease altho' Sauvages denies it, & therefore leaves it out of his System.

This Disease is difficult of Cure. it is hard to tell the Reason of this. It often baffles me as well as many Other Physicians who have spoke to me About it.

It is of two kinds 1 Mania & 2 Suppressio Mensium.

The Consequence of the 1st is a great Degree of Atonia of the Whole System & of the

Uterus in particular. is this Atonia the Effect or Cause or ye Disease? I shall not say, but ye Removal of the Atonia cures the Disease. how is this to be done? by ye Use of Venery this is the only radical Cure. I know of no Emenagogue that ever did any Service here.

2d Suppression is of two kinds depending 1st upon Constriction or some original bad Conformation. we see it in a vigorous State of ye Body w: a strong Determination to ye Uterus. or 2d upon Atonia w: makes it resemble the Emenciatmusium. great Care is

necessary to distinguish these two from each other. in the 1st Case Blood Letting is useful. it is no ~~blood~~ matter from whence it is drawn. I generally prefer the Arm to the Foot. in the 2nd Case big of Atonia very different Medicines are indicated. it is attended w: the a Laxity w: gives occasion to the serous Effusion called the Fluor Albus. this prevents the accumulation of red Blood & thus keeps up the Suppression of the Menses. I shall now speak of the Fluor Albus. it is only a different modification of the Hæmorrhagia Uterina.

It shd be distinguished from other serous purulent Discharges from the Uterus arising from topical Diseases in the Vagina or Uterus. the Fluor Albus comes from 1st Vessels 2ly from out the Menses. I wish I could distinguish them certainly from each other. the most common Marks are taken 1st from their Causes. the first is often attended w: great pain & some Degree of Inflam: 7th Diathesis. - no Distinction can be made from the Colour of the Matter discharged but 2nd when it disappears during

Menstruation we may pronounce safely that it is a Fluor Albus. Other purulent Discharges continue during the time of Menstruation as they come from different Vessels.

3d: the Fluor Albus is always connected w: Diseases of the Stomach or w: more or less pain in the Back & Loins.

4th: The Fluor Albus almost always attends profuse Menstrual Evacuations. It is to be treated like profuse Menstrual Evacuation depending on laxity of the w: spoke before. woman

who are barren labour most under it. Exercise especially Gestation is of the utmost Consequence in curing it. Sea voyages I believe would be a radical Cure for it. What shall we say to Injections? I have tried the Sacharum Saturni but never saw any remarkable Success.

The Hæmorrhoidal Swellings are not of the varicous kind or a Dilatation of the Coats of the veins. this I prove 1 from the veins being too small to admit of such a Swelling & 2nd from their contain: but little Blood when Opened.

They depend upon an Effusion of Blood into a cellular substance wch has a very thin Cuticle spread over it. you see then they arise from an Obstruction of the Hæmorhoid: veins, either from a plethoric Turgescence or a Compression of them. does the Blood always regurgitate from ye veins? no – we often see serous Matter discharged & this can come only

from the Arteries. moreover the Presence of Pain-Inflammation & Suppuration all show that some of ye Circumstances of Arterial Haemorrhage attend. the Stahlians deny that the blind & bleeding piles depend upon different affections of the Vena Portarum & ye Hypogastric veins, but these inosculate in such manner that they are both mutually affected & it is impossible to tell when either of them are affected separately.

How should the Haemorrhoids be cured & when? the Stahlian Dispute turns upon this Haemorrhage. when they arise from an Occasional Cause they may

be cured. the chief Occasional Cause giving Rise to them is Costiveness - I never knew a Person who was long subject to Costiveness, but w^h: was likewise subject to ye Hæmorrhoids. the Atra: biliary & Hypocondriac People are oftnest seized w^th: them. not from a Plethora of the vena Portarum as some suppose, but from a Costiveness w^h: always attends their Diseases. a Plethora I grant attends Atra bilianans, but not so early in Life as the Hæmorrhoids occur. I believe the Hæmorrhoids seldom depend upon a plethoric State of the vena Portarum. for women we

find are most subject to them. now they, we know have a natural Outlet for the superfluous Blood. the Hemorrhoids in them must therefore arise from Costiveness. for 4 women out of 5 labour under this Complaint. it perhaps arises Originally from pregnancy & continues afterwards from the Effect of Habit. Costive people are very subject to a Prolapsus Ani & this we know always induces the Hemorrhoids. I will not however deny but 2d: the plethoric state of the System in general & especially of ye Vena Portarum may have some share in

bringing on the Hæmorrhoids. I infer this from ye nature of ye morbus Piger. —

As soon as the Hæmorrhoidal Flux has been repeated a while it becomes necessary from the Law of Habit. — in this Case I agree w: the Stahlians in the Propriety of using no Medicines or using them w great Caution.

Method of Cure

We must 1: avoid Costiveness by particular Medicines only. all purgatives of a strong nature Operate chiefly on ye great Guts more especially the Rectum. all strong purgatives must

therefore be avoided in ye Hemorrhoids.
- such purgative must be chosen as will
discharge the Contents of the Guts without
stimulating the Bowels. the Fruits
such as Cassia Tamarinds do answer
this purpose very well. when they can-
not be had we must use Sulphur
viz: is so far dissolved as to evacuate the
Contents of the Bowels. it has no
stimulus upon this Ben: is useful in
all Hemorrhages, as well as ye Hemorrhoids.

The Neutral Salts may be used occa-
sionally but they are apt to operate too
strongly. Aloes is the best Remedy I
know for Obviating Costiveness. it does

it by promoting no more than One
Stool. in many Cases I have been
obliged to have Recourse to it in
this Disease when nothing else w:
answer. but ~~the~~ it should be used
w: great prudence & Caution.
2nd: The Second Indication is to strengthen
the berge of the Anus. even when the
Costiveness & Plethora are removed
the Laxity of the Anus & y^e Discharge
of Blood ~~often~~ continue every time
the Patient goes to Stool. Alum - Lac=
mar: Saturni or Vegetable Astringent
may be used in this Case w: Safety and
Advantage. But we must endeavour
to procure a Determinat: of y^e Blood

from the Anus. this must be done by Exercise especially Sitting and by spare Diet. People who live high & especially Drunkards are most disposed to the Hamorrhoids. this leads us to believe that they often depend upon a Plethora of ye Whole System. with this I finish my Acc^n: of the Hamorrhages.

I would here correct my Definition of the Profluvia in the Syllabus I gave you, & w.d beg leave to add to it "Pyrexia cum Lyrethrone naturaq; Lerosa Acerata" - we must seperate those Fluxes which are without Pyrexia from those which are, as the Pyrexia is the principal & fundamental Disease. But where shall we bring in the Other Fluxes. many Diseases of the Bowels are Spasmodic, such as Colicks Tenesmus - Flatus &c & will come in under the Motus Mordi: Mati in the Nervous. But what shall we say of the Dyarrhoea? it is mostly Symptomatic or Spasmodic - the Diabetes Phthysis:

mus &c are all Symptomatic or else be-
long to the Organic Diseases. the Gonorrhea
& several other Serous Discharges belong
to the Pyrexia.

The Profluvia agree w^th: the Hemorrhages
in many Cases in depending on Plethora
& particular Determination to some
one part of the Body. most of my Cases
of Profluvia w^ch: have not these two
marks are either Symptomatic or
belong to the Spasmodic Diseases.

all the Profluvia depend upon Acrid
Matter introduced into the Body. there
are two principal Genera of Profluvia viz
Catarrh & Dysentery. I consider Catarrh

in a comprehensive sense as including all Discharges of Mucus from every part of the Body. the Dysentery consists too in an increased secretion of Mucus but must be separated from the Catarrh upon ye account of its differing in several particulars from it.

The Catarrhs are always occasioned by an Matter introduced into ye Body. this I prove 1st from its being Epidemic & contagious & 2nd from their accompanying the Exanthemata or Other Diseases in wch we are sure Contagion prevails. to wch we may add 3rd their being so often bro't on by retained perspirable Matter

w^h: is determined to y^e: Mucous Glands of the Bronchia from their being so much exposed to the action of Cold. Catarrh is an Affection of the Incidrian membrane Fauces & Bronchia. it stimulates & inflames the Glands of these parts & thus excites that Fever w^h: constitutes the Pyrexia. the Mucous discharge is much changed & resembles Pus considerably. may it not be Pus? - by means of Inflamm^n: ye Mucus is so changed as to put on ~~the~~ many of the Qualities of Pus. When this happens the Discharge is converted, & ye Fever & Inflamm^n: terminate.

But the Discharge continues afterwards & often ends in a Consumption. either from eroding the Lungs by its acrimony or by inducing a Determination to the Lungs from its Stimulus which in time ends in Tubercles. I cannot determine positively which of these Causes happen. We shall next proceed to the

Method of Cure of Catarh

It must be cured like ye Other Inflam: Diseases by bl: Blisters &c. the use of Emetics are highly proper here to promote a Determination to ye Skin - they are moreover powerful Expectorants. Sweating is likewise highly

useful to restore the Perspiration notwithstand.g the Presence of y.e Inflam: Diathesis w.ch is in so small a Degree as to not to be increased by it.

Dysentery

How is this Disease to be distinguish: from Other Alvine Fluxes? most of Physicians distinguish it from y.e Degree of y.e Symptoms. The Discharge of Blood affords no Distinction as it occurs in the Dyarrhoea.

1: The Dysentery is a Disease of a particular Season depending on a particular kind of Weather w.ch generally prevails in y.e Month of August. But

it is induced by Heat & therefore in warm Climates prevails the whole year round - in cold Climates then ye Disease recurring in August serves to distinguish it from other Alvine Fluxes.

But a 2nd distinguishing Mark is that it accompanies Fever especially the Marsh Fever.

3rd It is accompanied wth Fever.

4th It is always contagious & therefore Epidemic . all these Marks taken together will distinguish it from every other Case of Flux.

It is a febrile Disease & therefore belongs to ye Pyrexia . It is always

ushered in by Fever at least in 19 Cases out of 20.

The Marsh Fever & Dysentery always occur together, & in ye same place. by Marsh Fever I understand all Cases of Fall Fever from ye tertian up to the Malignant. the Dysentery & Marsh Fever are often blended together, & pass into one another. if the Fever is duly formed & the Determination is as strong to the surface as it should be, we see no Dysenteric Symptoms & vice versa & hence the Reason why Persons affected w: the Dysentery are not seized

the w: the March Lower. But independent of Fever the Bile in ye Summer is much disposed to be effused into the Intestines. Dr. Sydenham describes it as occurring in August. it depends upon a particular state of the Bile. I conclude from this that Dysentery depends upon some Change induced upon ye Bil in ye Summer. to this we may add perhaps the Effusion of Perspirable Matter upon it. hence we find Dysenteries occur most when the Pores are shut up by Cold - Rain or Causes of this kind. — ~~poo~~ retained perspiration

we find is determined to the mucous Glands. it may therefore cooperate with the Bile in stimulating the Glands of the Intestines. the Dysenteric Contagion is not formed from without, originally, but is formed within the Body, & when this is the Case it becomes a Contagion & reproduces it in other people. will not this explain all the Cases of Contagion?

In the Dysentery there is a Constriction induced on the Surface, but the feverish determination is made to the Intestines so that a Dysentery

is a Febris intermittens of Dr Sydenham. the Constriction continuing on the Surface, tends to keep back the Determinatn to the Intestines. this we prove from the Coldness & Dryness of ye Skin & from it being cured by promoting a Determination to the Skin.

How does the Determinatn to the Intestines Operate? it not only increases the Secretion there, but excites the peristaltic Motion of the Guts & induces Spasmodic Affections of them wch constitute the Gripes. it operates chiefly on ye great Guts more

especially on the Colon on which it induces a Constriction so as retard the faeculent Matter in such a manner as to harden them there into ye: are called Scyballa. the Colon then does not act nor discharge its Contents in its usual way. these Scyballa by their irritation squeeze out Blood & thus bring on bloody Stools. this I infer from the Stools continuing as frequent as ever while no purgatives help thro the Body. & 2nd from faeculent Matters being discharged when ye Purgatives do operate. both these show ye Obstruction to have been strongly fixed in ye Colon.

this is of the greatest Importance. I have cured them often by ordering my Patient ~~for~~ to go out of a warm Room to a cold One.

6th What shall we say to Ligatures?

I have sometimes seen them useful in Hæmorrhages from the Lungs. but when they compress the Arteries they do Harm. even in those Cases when the Veins only are compressed the Blood regurgitates into the Arteries & thus resists the Action of the Heart. upon my Whole I look upon them as ~~an~~ Ambiguous, & w: not by any Means recommend them in Ordinary Cases. —

What shall we say to warm Bathing.
When it is applied so gently as to
relax the vessels it may be useful, but
it often stimulates ye System & rarefies
the Blood, & thus increases ye Discharge.
I think this Remedy like ye Ligatures
very ambiguous.

Emetics have been proposed in
Hæmorrhages. Dr. Robinson first intro-
duced them particularly in Hæmoptoes.
he prolonged the Lives of many Patients
by them. they seem to act by exciting
a Determination to the Skin. nauseating
medicines ought be preferred to Emetics.
do they produce an Adstriction upon the

bleeding vessels? I believe not - the analogy of Vomit.s in Other Diseases gives us Reason to think they act chiefly by determining to the Skin.

9.th The Use of Blisters. I have learned from an Apothecary of this City that a Blister to the Back has cured a bleeding at the Nose. I have used them to the same Use in Hemoptoe with Success. they should be used with Caution in Hemorrhages from the Uterus or Hemorrhoidal Vessels, upon the Account of bringing on a Tenesmus or the venereal Appetite.

10.th Opiates are highly useful in Hemorrhages. they act by diminishing the Sensibility

of the System. many Disputes have been carried on Ab: them. they irritate the System & encrease the Inflam: Diathesis I grant. they should not therefore be used too early or too rashly. they sh: not be used ~~therefore~~ till the Inflam: Diathesis of the System is removed by Bleeding or Other Remedies. in all Cases of great Irritation such as a Cough in y Hæmoptoe they may be given safely & w th advantage. in all Cases too of false pains in preg: nant Women they are safe & useful.

We must next attempt to encrease the Resistance of the part to which the

Blood is determined. this must be done 1st by the use of Astringents ~~and the~~ many Disputes have been entertained concerning their use. the Italians forbid them, & say they produce an Accumulation or a morbid Determination of the Blood to some other part. When Hæmorrhage arises from an Occasional Cause we may use them very safely, provided we can get hold to the part from whence the Blood flows. What Astringents are to be employed? they are internal & external. the internal are of little Efficacy during the time of Hæmorrhage. the Italians have

long ago observed that they have no effect in Hemorrhages from the Nose. — we understand but little of ye Operation of internal Astringents. they cannot Operate on the part affected immediately either to contract the bleed: vessels or to coagulate the Blood. they Operate on the Stomach only. But how? either by induc: an Atonia or a Constriction w: is propagated to distant parts, or in both these ways. Astringents must be very powerful so as to affect the Stomach & the whole System. the Preparations of Lead are the most powerful, but their use is attended w: Danger.

<u>Alum</u> is Another Astringent much

used in Hemorrhages. it is hard to tell when it does prove as Hemor:rhages are so apt to stop of themselves. I think I have sometimes seen it do Good.

The Chalybeats & vegetable Astrin:gents do no service in present Hemorrhages. they act as Tonics & may thus Obviate the Return of Hemorrhages.

External Astringents are used only in the Hemorrhoids & a Bleeding of the Nose. they dont Operate by constricting the vessels as some suppose but by coa:gulating the Blood. Nature we see closes Hemorrhages in ye same manner by

a Thrombus of coagulable Lymph. all
medicines will prove astringent wch
seperate the coagulable Lymph from the
blood. all extraneous Bodies will have
this Effect. the Agaric & Sponge both
operate in this way by coagulating Lymph.
— a Surgeon informed me lately that
he had found Oil very powerful
in stopping Hæmorrhages. I wd recom:
mend to your Royal. it must operate like
the Agaric & Sponge. they Ohd all be
applied in a dry form, for if they become
wet wth the serum of the blood, they no
longer seperate the Lymph.
a very powerful Checker of Hæmor:
rhages is Cold. it operates as a Cooler,

It by diminishing the increased Action of the vessels. you will easily understand the rest of its Operation from w^h: we said of the Treatment of ye Small-pox. It should be employed internally & externally. I know of no Astringent equal to it. One thing I must Observe here w^h: seems a little subtile. cold water when thrown upon ye nose while Bleeding, if it dont stop it at Once then encreases it by encreasing ye Circulation of the bleeding vessels by its stimulus. in this Case the Cold must be applied to such parts of the Body as have most Sensibility such as ye Arm-pits. Neck - Scrotum & the like.

The mind shd. be diverted as much as possible. I have stopped a Hæmorrhage in Children entirely by exciting some Emotion in their minds. allsy. famous Sympathetic Styptic Medicines can Operate only in this way. Horror is excited by a dried Toad, & thus Opium does Service. this is much used in Germany. This finishes my general Acct. of Remedies used in Hæmorrhages. I shall next proceed to give some general Observations upon particular Hæmorrhages.

This is of no Consequence but as it pro=
duces a Plethora or a Habit wch w^l return
periodically. it is seldom fatal. it oc=
curs mostly about Puberty. When it
happens at the time it is attended
wth bad Consequences. it should never be
neglected, for if y^e Habit indeed
should be checked by Age or Accident, the
Plethora is transferred to the Breast. I
w^d therefore recommend the moderating
or surpressing Hæmorrhages from ye Nose
in young People by all ye Medicines
we have spoke of before.

The Stahlians agree that this Hæmorrhage shd: not be encouraged. It is not always so dangerous as has been imagined. When it happens from external violence it never proves fatal unless it seizes those who were disposed Hereditarily to Consumptions. it is an Hæmorrhage from ye Nose in those Cases. ~~But~~ When it happens from a Determination to the Lungs, from a Suppression of Other Evacuations it does no Harm. we Often see it wth out any bad Consequences in women whose Menses are Obstructed. it is cured as soon as the Menses are restored. ——

But I go further I have often seen persons disposed to Consumption from the Conformation of their Thorax, lived th: an Hemoptoe & yet they have recovered without falling into a Phtisis. But what then makes Hemoptoe dangerous? & How does it produce Phtisis? – the Vessels when kept open dont always terminate in Ulcers of a consumptive nature. Ulcers heal as well in ye Lungs as in any other part of the Body. I have seen many Instances of it. But dont the external Air prevent their healing? No – the Ulcers are defended from ye Air,

(a) a lesser Determin^n than is suff^t to induce ~~Tubercles~~ an Hemoptoe will bring on a Tubercle. this Tubercle by becoming Acrid brings on Hemoptoe. —

The Danger then attending Haemoptoe must depend upon some Other Cause not yet explained. —

The Determinations to the Lungs are not always strong enough to break a red Artery. Haemoptoe often arises from Effusions into the Parenchymatous Substance of the Lungs or into that cellular Texture which is distinct from the Bronchia. This Effusion is made into a part where there are no Lymphatics, or it may be of a Matter that is unfit to be absorbed. This Effusion forms what is called a Tubercle of the Lungs. but Tubercles may be produced from another Cause. Scrophulous Patients are very

subject to them. the Scrophulaceous conglobate Glands. these conglobate Glands are found along the Trachea altho' they are not seen in the Lungs. - the Scrophulous Matter however is not confined to conglobate Glands it is effused in various parts of the System especially in the cellular part of the Lungs. - thus then ye Scrophul: Humor may be the Foundation of Tubercles. - there may independant of all this be certain Effusions of a particular kind of Matter into the Lungs wch w: produces ulcers wch w: are incurable. from all this we may understand when the

Hæmoptoe terminates in a Phthisis viz: When it forms Tubercles in the Lungs. How are Tubercles to be resolved or cosettic Ulcers produced by them to be healed? I know of no Remedy for them but cannot help thinking Nature has some Cure in store for them.

Method of Cure.

Hæmoptoe is to be Cured by ye Remedies we before spoke off, more especially by inducing a Determination from ye lungs. This is done chiefly by avoiding Cold - hence the Reason why we send our Patients

from this Country to warm Climates in the winter Season. But we shd: be cautious of sending them to too warm Climates. Consumptions prove much sooner fatal in warm than in cold Climates. we must therefore strictly forbid their spending the Summer in the warm Climates.

Vomits. Bleeding & Issues should be used Occasionally even in Cases of Tubercles. these Tubercles are often crayded & are thrown off in vomiting especially after a previous Inflammation & suppuration has been excited around them.

The general Doctrine of Hæmorrhage explains the nature of ye menstrual Flux. the vessels of ye Uterus are evolved at a certain Age, & from the Ballance of the System being thrown upon them they pour forth Blood periodically.

I shall 1st: Observe here y^t^: the Menstrual Flux overthrows the Statian Doctrine for Altho' it is necessary to ye Health of the System we find it subject to great variations.

I shall now consider ye immoderate Flux of Blood from them. I shall

I Speak of its coming on at improper times &

II its being in too large quantities at regular periods.

the 1st: happens during the time of Pregnancy. at this Period Menses ought always be suppressed. when they occur they threaten Abortion. if they will do flow during Pregnancy they wont doing Harm they must come from other vessels distinct from the Ordinary Ones which from Anty Menstrual Blood.

Bloodings in Pregnancy depend either 1st upon an increased Impetus of the Blood, or 2nd upon a Preternatural

Laxity of the Uterine Vessels. the
Suppression of ye Menses produces
a plethoric state, & on this ye tendency
to Hæmorrhage in some measure
depends. upon this ye Blooding
has been much used in impending
Abortions, but I have often seen
Blooding do Harm & bring on a
Miscarriage, upon this ye I suspect
the last Case bid a Laxity of the
Vessels as the principal Cause of Abor-
tion. this is the Reason why those
Women are most subject to Abor-
tion who have ye Menses in ye greatest

Quantity. now Bleeding here carries off entirely ye Degree of Tension w^ch: always is connected wth Conception & Pregnancy necessarily. we always find the Inflam^n. Diathesis present in Pregnancy. this the Phe: omena of the Blood shows. if therefore we remove this necessary Tension by Bleeding we may induce a Miscarriage. let us therefore learn to moderate the use of ye Lan in pregnant women except we see the Face flushed. or many Other Marks of too high Tension or Inflam^n:

Diathesis. these Cases of Laxity require the greatest Care such as little Motion spare Die - rest in a horizontal Posture - & in a word every part of the Antiphlogistic Regimen except Blood: Letting.

The use of Cold is of great use in the time of Pregnancy. Heat always increases their Complaints. The pregnant woman sh: lie w: light Bed Cloathes - sh: have no Fire in their Chambers but on the contrary have their windows often Open. But further I have seen Cold Water applied to

the Female of the Back wth advantage.
in some Cases I have ordered the
water to be impregnated w^th^: La=
=chrum Saturnii.

II we come now to y^e^ Case where
they flow at regular Periods but in
in an excessive Quantity y^e^
Causes of this are 3.

1st the Plethoric state from an idle
Life & a full animal Diet. all
women who are fond of Spirituous
Liquors have y^e^ Menses in too great
Quantities or labour under some Dis=
=ease of the Uterus. they likewise have
y^e^ Menses much later in Life y^n^ is usual.
I have seen y^m^: at y^e^ 60th: year in such women.

2nd: such things as determine too much to the Uterus, more especially Excess in Venery before the time of Menstruation comes on. Excess of Menstruation & a Libidinous Disposition are always always united.

3rd: a preternatural laxity of the Vessels of the Uterus depending upon original Conformation. I have seen women in this Country menstruate at 8 Years of Age. all women who have the Menses early have them in too great Quantities ever afterwards.

or 2nd: upon frequent Abortions or frequent

Deliveries. ye Frequency of Hemor-
rhages overstretches the vessels &
disposes them to return again.
Women are seldom aware of ye Conse-
quences of profuse Uterine Hemor-
rhages & this makes them so difficult
to cure. the Reason of it is because
we cannot persuade them to use
moderate Exercise at ye Intervals
to procure a Determination from
ye Uterus nor will they lie on a
horizotal posture during their
Menstruation nor yet use the Spare
Diet, or avoid venery. When we

are sure that ye Hæmorrhage
rises from Plethora there Bloodletg.
may be used, or if we are sure it
comes on from excessive Repletion.
here tonic Medicines do Harm.
But this is seldom the Case than
imagined. When it arises
from laxity Bark Chalybeates
ye cold Bath should be used. But
both Cases are sometimes combined;
here all the tonic medicines may
be used after moderate Bg. has been
ordered.

we exclude all Hæmorrhages from this
Order wch are without Fever. they are
all connected the in their Causes
& Nature w: the Phlegmasia.
Pathologists have divided Hæmorrha-
ges into Active & passive. we shall
only speak of the 1st. the Second are
Organic Diseases & depend upon
Wounds &c. those of them wch defend
on Laxity are always connected the w:
the Active. —
But what shall we say to ye Dysentery?
here a Hæmorrhage & Profluvium are
connected. but the Hæmorrhage

is only an accidental symptom. the Dysentery may subsist without it.

Hemorrhages depend upon an increased action of the vessels pouring out Blood & sometimes of the whole System. it arises from previous Congestion as I told you before. we never see it w^th^out previous Congestion w^h^ induces spasm col Fitt & all the Phenomena of Fever. it is always accompanied like Inflamm^n^ wth Phlogistic Diathesis. it agrees then wth Inflamm^n^ in most of its Circumstances. it differs only in this by occurring in vessels

w: easily admit of Rupture & an Effusion of red Blood. on w^h do Congestions depend? 1st upon an Inequality in the Distribution of the Blood depending on a preternatural Laxity in some part, or a greater ~~Rotation of Blo~~ Resistance in one part than Another. 2nd: upon ye Body; being in a plethoric state. w^h out this ~~the~~ Congestion will not be disposed to end in Hæmorrhages. This plethoric state increases Tension & w^h it Irritation & Sensibility w^h disposes to Hæmorrhage.

Hæmorrhages are connected w^h certain periods of human Life. hence is

Room for an amble Dissertation upon the Equilibrium of the System but I must refer you to my Physiological Lectures for it. I shall only deliver a few general propositions upon it. —

a proper Degree of Tension or plethoric state is necessary to the Growth of the Body. as the Body increases the Solids resist more, & hence the Plethora increases to them so much as to dispose to Hæmorrhages hence we see Hæmorrhages from the Nose occur about Puberty. this depends upon a greater Determination of Blood to the Head & a particular Conformation of the Vessels of ye Nose. After Puberty

the Determination of the Blood is changed especially in Females in whom the Blood is accumulated in the Uterus in such a Manner as to become spontaneous Hæmorrhage & therefore often to be considered as morbid. When ye Body arrives at its Acme ye Resistance of ye Arteries becomes in a Ballance w: ye Force of the Heart. There is likewise a nice Ballance between ye Arterial & Nervous System but it is so formed as that any Deviation from ye Ballance throwes upon ye Arteries. This State continues from 15 or 16 to 35. & this is the Period in wch Hæmorrhages

(a) the Smaller the Lungs the more disposed they are to pour out the Blood. hence People with small Chests are most disposed to Consumption

most generally occur. It is now that
all ye occasional Causes of Hæmorrhage
are spoke off when they happen seldom
fail of bringing an Hæmorrhage.
- the Lungs are ye most common
outlet for the Blood from ye texture
of fine. (a) beyond 36 no Arterial
Congestion happens. all Plethora is
now thrown upon the veins. this
will often obstruct the Intrance of ye
Blood from ye Arteries to ye veins.
this will often occur to such a Degree
as to cause Blood to regurgitate thro
the extreme Arteries & thus
occasion a venous Hæmorrhage

these kind of Hemorhages are not always attended w: an increased action of the heart & Arteries nor w: the ordinary Phenomena of Hemorrhage unless the Congestion becomes so great as to induce them then it becomes an Arterial Plethora. These venous Hemorrhages occur most where the blood is most liable to stagnate viz in the vena Portarum. this blood when it stagnates regurgitates into the most pendulous lax parts especially if they are subject to Pressure such as the Hemorhoidal veins w: we know are destitute

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of veins - are seated in a lax part & are ordinarily compressed by ye Rectum filled wth Feces. this explains the Reason why the Hæmorrhoids occur mostly in the Decline of Life. this Blood is sometimes emptied into the Bowels & then it constitutes the Morbus Niger or Melena of Sauvauge.

But Venous Hæmorrhages may occur elsewhere. the Blood is returned very slowly from ye Head hence a plethora occurs in ye veins there in Old Age when ye Action of the Arteries is diminished. this explains

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the Reason why old as well as young men are subject to Haemorhages from ye Nose altho' they depend on different Causes. Sometimes serum only is effused, into ye Cavity of the Brain where it induces Coma - Apoplexy & Palsy.. Sometimes red Blood is effused. this brings on Apoplexy & sudden Death. these are ye principal genera of Haemorhages. I preclude the vomiting of Blood & ye Discharge of Blood by urine from ye Genera of Haemorhages as they are always vicarious or depend on Lesions. the Dysentery I have rejected. I shall include

all the Other Genera of Sauvage.

Hæmorrhages from an internal Cause may sometimes be critical & salutary by restoring the Ballance of the System. This is ye capital Doctrine of the Stahlian System. But they have pushed it too far. The necessity of Hæmorrhages is Often occasional & does not subsist beyond the occasion. they are not absolutely necessary to ye Health of the System. many Persons escape thro' Life without being seized w: them. They are Often the Consequence of violent Exercise - Passions of ye Mind - Intemperance & the like! But these Causes Bout-

always operate. we cannot therefore admit the necessity of Hemorrhages in all Cases as necessary to Health.

They may be obviated before they ever wrought any Disadvantages.

If ever they are necessary it is the Consequence of Habit & not of ye Original Make of the Constitution. Blood: Letting we know becomes necessary by Repetition. This depends upon ye Arteries not accomodating themselves immediately to ye Quantity of Blood remaining after venesection. Secretions are thereby demnished & all additional

aliment is accumulated in the arteries so as to bring on Plethora. - thus Spontaneous Hæmorrhages then always bring back the Causes of them again. upon this ac.: they should not be encouraged as they will encrease themselves. I would therefore contrary to ye Stahlians moderate all Hæmorrhages & endeavour to divert them another way.

. the plethoric state or Overstretching of the vessels takes place more especially in those places from whence the Hæmorrhages break out. to obviate this Laxity

of the Vessels Electricity has been found to do great service. the Revd: & worthy Mr: Townshend ~~info~~ has lately informed me that he has cured many Ophthalmias by drawing Sparks of Electrical Fire from ye Eye. all ye Redness disappears at once, & if Astringents are immediately used it never returns again.

But further the Vessels by being Overstretched by Congestion acquire a greater Irritability wch: disposes to Inflammation & all this should lead us to attempt the Cure of Hæmorrhages.

But in Favour of them I would observe that they obviate the Plethora

remove $\frac{e}{y}$ Inflam.y Diathesis of the System, & thus stop & cure themselves.

- But still an Effusion may happen in Hemorrhages & this Effusion seldom fails to weaken the System in such a Manner as to bring on Hydropic Affections.

Method of Cure

I shall begin by treating

1st on the Manner of preventing their Return. -

2nd on $\frac{e}{y}$ Means of moderating & suspending them.

1 to prevent their Return we must

1st Abviate a Plethora 1st by a low Diet

both in Quality & Quantity. Some suppose Hæmorhages are not founded on a general Plethora & that therefore a low Diet is less necessary, but we have said Hæmorhages are founded on the Diathesis phlogistica & therefore a spare Diet becomes necessary to obviate this, as in all Cases of topical Inflammation. But further a Plethora may be occasioned by a want of Exercise wch throws ye Ballance upon the Arteries, we must therefore 2nd promote the Excretions by ye Exercise wch opens the excretory vessels. our chief Dependance must be placed upon this. It must be constant

& uniform & not used by Fits & starts.

- bodily Exercise is preferable to Gestation except in the Hemoptic state of the Lungs. here it determines the Blood too copiously before the Excretions can be opened. in Cases of Hemoptoe then Gestation must be used.

- In Cases of particular Determinations of Blood to a particular part disposing to Hemorrhage, Exercise is the only Cure. it determines powerfully to the Skin. & thus takes of internal Determination. Riding & Sailing in the Hemoptoe act in this way. no wonder

Dr. Sydenham commends them so highly. Yet if however they are ordered early in the Disease they often do Harm. Sailing is the best in the advanced state of Hæmoptoes.

a 3rd Mean of obviating Hæmorrhages has been proposed viz: stated Evacuations particularly of Blood once or twice a Year. this is much practised in Germany. the Repetition of it brings on a general Plethora viz: when removed obviates likewise particular Determinations. Scarifying has likewise been found useful. it acts by withdrawing a Determination from One part to another.

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But I do not approve of these Remedies.
- the Bleeding produces a plethoric
state wch: is not always periodical.
- it sometimes produces it sooner yn:
the stated period. & when this is ye Case
if there shd: be a Determination to
the Lungs or any other parts yd: Plethora
would soon bring on a Hæmoptoe
from them before we were aware of it
or before we thot it time to Obviate
the predisposing Cause to it. When a
Plethora has actually taken place then
Blood Letting may be used wth: advantage.
- if we have been in a habit of Blood-
letting we must endeavour to remove ey

II.

necessity of it by bleeding at shorter intervals & in lesser quantities.

II. Hæmorrhages are to be moderated & subsisted.

i by taking off the Inflam.ry Diathesis or encreased action of the vessels in the whole system, but especially in the parts from whence the blood flows. this must be done 1st by Blood-Letting. this must be used chiefly in Cases of Inflam.ry Diathesis. it alters the Determinat.n of the blood. what quantity must be taken away? the Germans seldom draw more th Xvij. the French take much greater quantities but they both run into extremes. I believe we

have hit the proper Medicines in England.

2nd. by Refrigerants - Nitre has been much commended for this purpose. but it proves Refrigerant only when first received into the stomach. the Acids are more powerful Refrigerants especially the vegetable & citric & nitrous & muriatic are too heating.

3 by avoiding Irritation from all causes.

4th by lessening the weight of the Blood. this is of great Importance. thus Women subject to uterine Hæmorrhages should always lie on their Backs.

5th. by avoiding the Irritation of Heat

Bodily Exercise is the best here in an erect posture more especially walking.

See the Character of this Order in the Syllabus we gave in the 1st Volume. it comprehends Paralysis Hemiplegia & Paraplegia each of wch Lawrence makes a distinct Genus, but they are only different Degrees of a Disease depending on the same Cause. I shall include them all under the name of —

Paralysis.

I define it a Loss of Motion without any Organic Affections of the Muscles. I mean by Organic Affections [redacted] the Affections of the Sanguifs: System entering into Muscles. we seperate all those

Paralytic Affections from these wh: occur in the Natural or vital Functions - I confine it only to a Loss of Motion in the voluntary Functions. a Loss of Sense is not essential to this Diseases, & therefore th: not constitute a generic Term. by Loss of motion I mean only y: Degree of it wh: consists in a Loss of voluntary motion. inferior Degrees of Loss of motion I call dim atonia.

The Causes of Paralysis may be informed either 1st to Compression or 2nd to diminished Excitement by

we understand Causes we act directly upon the Nervous power. Apoplexy & Palsy are the same States of the System only in a different Degree. we distinguish them from each Other by One being "cum" & the Other "Sine" Sopore. in the One the Senses are abolished in the Other they Senses remain. Palsy then depends upon a partial Compression & a partial diminished Excitement. How shall we Acc.t for Sense remaining after Motion is destroyed? the Nerves of Sense & Motion differ only in their Extremities & not in their Origin. they are united by Fasciculi the

one another. why then dont ye same causes destroy them both. Dr Haller explains this by saying that a greater force is necessary to destroy sense than motion. this however is merely a hypothesis & could be easily refuted. I would offer another explanation. in sense the sensorium is passive. in motion it is active. direct sensations produce the first, the reflex sensations produce the second. there is a peculiar mechanism in ye brain on wch reaction or ye efforts of will depends. this mechanism may be destroyed

while every part of the brain on which sense depends remains entire.

Further, Sensibility & Irritability altho' so often connected, are sometimes widely distinct from each other. Irritability may sometimes then be destroyed while sensibility may remain the same. you may receive any of these Hypotheses you please.

Compression & diminish.d Excitement give very different & opposite Indications of Cure. Palsy depending on Hemorrhagic or Hydropic Apoplexy require very

different Methods of Cure. Palsy therefore depending on diminished Excitement requires a different Treatment from them both. the Practice in the Palsy among practicalwriters & Physicians has been very much at random. they most of them had Compression only in view. I will therefore give some proofs of diminished Excitement producing Pals. there are 1st the Causes of Palsy 2nd the duration & 3rd the Cure of Palsy all prove that another Cause besides Compression may produce Palsy. for we see Poisons which cannot act by Compression

induce Palsy, & 2nd the Duration proves it, for if it depended on Compression it would soon end in the Loss of Sense in Atrophy & Death. if the Palsy arose from Effusion the effused Matter would soon be converted into Pus & thus produce worse Consequences, nor can we suppose any thing like an exact balance going on between Effusion & Absorption for any considerable time especially when we see no Alteration happens in the Symptoms or Degree of 4.) Palsy. but 3rd we see Palsy cured by Stimuli. these surely would rather increase

Effusions than cure Palsy depending upon them, especially a stimulus so violent as Electricity w.h operates directly upon the Nervous power in exciting ~~the~~ ~~has~~ it. it acts on the Arterial System in a secondary manner. whenever therefore Electricity - Fear - or other Passions cure Palsy I always conclude it depends upon demonished Irritabilit. Diembroeck relates a remarkable case of a woman who had been seized w.h a Palsy from Fear w.h continued 30 years & was at last cured by her being exposed to a thunder storm. here the

Cause - Duration & Cure of ye Disease all show the Disease to have arose from diminished Excitement. I knew a Gentleman in Glasgow who was relieved for some Minutes from an Amaurosis by a Flash of Lightning striking his Eyes as he was walking the Streets.

How shall we distinguish these two Species of Palsy? 1° Palsy arising from Apoplexy generally depends on Compression. But the Compression in this Case is often removed & leaves a diminished Excitement behind it. When

Palsy continues for some time invariably the same, & the Patient has the use of his Intellectual Faculties, we may safely presume it depends upon diminished Excitement rather than continued Compression. 2 if ye Hemorrhagic state inducing the Apoplexy at first continues, we may presume Palsy depends upon Compression 3d Palsy arising from Apoplexy w: arises from Dropsy are generally from Compression. 4th: Palsy arises from compression in proportion as the intellectual faculties are impaired. This applies to both

Cases of Hydrophia & Hæmorrhagia Apoplex-
-ies. the Faculties being impaired
show a very general affection of the
Sensorium, for we often see sense
continue entire when a great part
of the Brain is destroyed. 5. a local
affection is an argument in favour
of diminished Excitement & often arises
from same Cause within the Nerve
6th Palsies continuing for a long time
w. little Alteration depend upon dimini-
-shed Excitement. the Alterations refer-
-to are in the intellectual Faculties.
if they vary much impaired we may pronounce safely

that it depends upon Compression

But why are not Cases of diminished Excitement subject to variety? they are subject to variety but it arises only from those Causes wch increase or diminish the Excitement of the Sensorium, such as the stimulant & or sedative passions. There are however Cases of diminish Excitement wch are connected wch convulsive Hysteric Diseases wch are subject to greater Alterat.s than those depending on Compression.

- we cannot then suppose the compression shifts suddenly from One part of the

Sensorium to the Other. 6th The Causes of diminished Excitement are further distinguished from the Causes producing it. Cold & Poisons both Operate by taking off the Excitement of the Sensorium. the Passions of ye Mind in like manner cannot act by Compression violent Pain likewise acts by ye inducing an Atonia & then a diminished Excitement. Palsies occurring in the Albreme of Arterial & venous Plethora are generally owing to a diminished Excitement of ye Sensorium.

Method of Cure

Palsy from Hemorrhagic Effusions are to be cured by Evacuations &c

Palsy from Hydropic Effusions are to be cured by Medicines w.ch produce Absorption of which we shall speak hereafter.

Palsy from diminished Excitement require Stimulants. The most considerable are 1st Warm Climate 2nd Warm ~~Cloa~~ Bathing. but before we use them we should be confident it is a Case of diminished Excitement, or we shall do a great

deal of Mischief, for the warmth here occasions Plethora by rarefying the Blood. 3d: Acid Substances applied externally have no Effect. I have tried them a 100 times without any Advantage. 4: the Electrical Shock is the most powerful Stimulus I know. It is chiefly or only useful in Cases of diminished Excitement. It is seldom used long enough or strong enough. all Medicines of any Effect require a due Quantity of them to be given, & for a considerable time. Opium Bark & Camphor have no Virtue in small Doses. Dr. De Haen tells us 2:

he often used Electricity for 3 Months
the wch out success, but after using it 6 Months
it produced its desired Effects. Some Cases
indeed are Proof ag^n all Stimulants.
- we must allow after all that
some Diseases of the human Body are
incurable. There are Cases wch are ambi-
guous between those of Deminished Excite-
ment & those from Compression.
Great Caution is necessary in using Elec-
tricity in these doubtful Cases. I have
seen Death brought on by it.
I shall conclude this Lecture wth a
remarkable Case wch Once occurred to me

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in Practice. a Gentleman was seized w: the a Hemiplegia. in one Arm he had a Loss of Motion in the other an entire Loss of Sense together w: the a Coldness & want of Pulse. on w: did this last Phenomenon depend? - was the Coldness owing to a Defect in y Blood's Circulation in y Arm as y Cause or Vehicle of Anim: Heat? No Sensibility as well as ~~contra~~ y Heat of y Body depend upon a certain Degree of Tension in the Arteries. this we see illustrated beautifully in y Retina & Schneidrian Membrane. the want of y usual Tension therefore in y Arm Acc: for all the Symptoms he spoke of. —

Sauvages includes 4 Genera under this Order. the 1st Atonia belongs to Atonia or imperfect Palsy & is seated in the Animal Functions. the Lypothymia Lypnopse & Asphixia need not be distinguished. the Lypothymia & Lypnopse are different Degrees of the same Genus, & depend on the same Cause. the Asphixia includes every Resemblance of Death, but may be brot under ye Genus of Syncope, wch comprehends all the Affections of the vital Functions Only & not the Animal & Natural wch the Asphixia does. I shall confine myself only to One Genus in this

(or) The Definition of this is "such a weakened Action of the Heart as ~~[illegible]~~ to cause a Stagnation of the Blood" – it is known by Palenessof a Sinking of the Pulse, & by the intellectual Faculties being ~~[illegible]~~ impaired

Order wch I shall call Lypnope. but what are the Causes of Lypnope? they are 1st such as act directly on the Heart & 2nd such as act on the Sensorium & thus indirectly upon the Heart. the 1st arise from Tumor-Inflamns.-wounds. or Ossifications of the Heart as well as 2nd Affections of the Neighbouring parts from Dropsy & other Diseases or 3rd from all Impediments of the Blood; return into the Heart 4th from Polypi-Aneurisms. or Ossifications in the large Arteries wch prevent the Hea-

unfolding itself. 5ly from a sudden increase of the blood Course to the heart or from its being thrown there in too large quantities. all the Causes we have mentioned here, dont produce Syncope. all Cases of Obstruction indeed even Palpitations of the Heart, but they may end in Palsy or Spasm. wch often take place in Syncope. it is hard to tell - the Pulse & the state of ye Veins afford no Diagnosis here. After Death the Ventricles are mostly found full especially the right Ventricle wch gives us Reason rather to suppose Palsy attends.

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The Causes operating on the Brain we are sure act by producing Palsy wh: induces me to believe that those Causes wh: operate on the Heart directly operate in the same way.

The Heart is a Muscle & depends upon an Energy of a vis nervea from the Brain. I do not admit a vis Insita in the Heart. the Phenomena of Syncope afford the strongest Argum: against it. What Causes then suspend the Action of the Brain so as to affect the Motion of the Heart? ∴ the Action of the Heart is absolutely necessary to the

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Action of the Sensorium, pure I grant is a Circle. but the Action of ye Brain was previous to the Contraction of the Heart. every thing then ye: diminishes the Impulse or the Quantity of Blood propelled to ye Brain brings on Syncope such as Hemorrhages & Venaesection. the last operates after the Flowing of the Blood is stopt from the Compression being taken off from ye Arteries which suffers the Blood to desert the Brain.

Paracentesis likewise induces Syncope as well as copious Evacuation by Stool. they

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all act by taking off ye Impulse of the Blood from ye Brain. This I presume from Syncope being cured by a Horizontal Posture

2nd: Another Cause acting on ye Brain is the suddenly taking off the Tension from the Whole or any part of the System. The Opening an Abscess & the Sudden Ceasing of any pain often brings on Syncope. The Relaxation from any great Efforts such as Child bearing or even a great Evacuation by Stool - or by Urine have sometimes induced Syncope merely by suddenly taking

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of the Tension of the System. from this
Inferry^d a Fulness of the Arteries of
the Medull^r Substance of ye Brain
is as necessary to the Tension of the
whole System as a Fulness of a parti-
cular Artery is to the Tension of a Senti-
ment Extremity.

3rd But there are Causes wch induce Syncope
wch act perhaps rather from taking off
Excitement than Tension. such as 1st
the Affections of the Stomach. Syncope induces
Vomiting or a particular State of the
Stomach. may we not convert this
Analogy & say a particular State of

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the stomach may bring on Lyncope.
- how do these affections of ye Stomach
operate? I cannot tell. —

2d: Another Source of Lyncope is such
Causes as we are sure take off Excite:
:ment. these are 1st: violent Emotions
of the Mind 2d: by exciting too highly
bring on a Collapse of the Brain after:
:wards. Joy operates in this way. Jeus:
:ful Electricity & Lightning operate in
the same manner. the Emotions I
refer to, are chiefly of the active kind.
but there are others ye dont excite first but
induce Lyncope by gradually taking off

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Excitement, such as Fear. Some
we see faint upon seeing or hear-
ing of wound. Blood &c. This depends
upon suddenly diminishing the Excite-
ment of the Sensorium. Odors
of a particular kind induce Syncope.
How do they operate? not as Sedatives,
or they would be more uniform in
their Operation on different Persons.
Musk to me is an agreable Smell &
excites my Sensorium but to others
it gives pain & induces Syncope. but some
Odors do act as Sedatives. Some too induce
their Effects on the Sensorium from acting

on the Stomach. there are some
ch
w: induce a general Debility & thus
expose Persons to the Causes of Syn=
cope such as the Causes of Fevers.
the Sensory in like manner expo=
ses the Sensorium to be more readily
acted on by the Causes of Syncope.
the Matter of certain Ulcers especially
of Cancers - Gangrenes & Sphacelus' like=
=wise
expose the Body to the Occasional Causes
of Syncope. all these Causes dont
act uniformly. they operate only on a
Predisposed. what then is this concur=
ring Predisposition? this is different

in different Persons. it continues uni-
versally in a certain Mobility of the
System. y: is when light Impressions pro-
duce great Motions or large Oscillations.
- who possess these Mobile Habits?
Such as labour under an Arterial
Plethora are most subject to those
Syncopes, w: depend upon an Alteration
of Tension. the Arteries here are fuller
& more strong w: gives them a more
exquisite Degree of Sensibility, & ~~m~~
greater Oscillations. the Brain suffers
a: every Change of Tension in the whole
Arterial System. Persons who are subject
to Faint upon Bleeding, if the Bleeding

in repeated two or three times never faint at all which depends upon the Arteries themselves in the last Bleeding accommodat.g ~~to~~ more readily to the Blood. This Obser:vation is of great use & application in Practice, but great Care should be taken to distinguish between those Faintings which arise from excess of Tension & mere Debility.

But 2.nd the Predisposition to Syncope will depend upon a certain Degree of Den:sity & Mobility in the nervous Fluid.

But 3.d which is that Predisposition which does not ~~not~~ dispose to Syncope from Relaxing off Tension? — I said before

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it was a Redisposition to be too highly excited wh. leaves the Sensorium to collapse so much as to end in Death afterwards.

4th Debility from Scurvy Fever or other Diseases disposed to all the Causes of Syncope.

5th The violent Emotions of the Mind that are more passionate as rear together with Odors & disagreable Sensations appear to act entirely as Sedatives upon the Nervous power, & require particul. Redisposition which we cannot well explain.

Syncopes are seldom the Effects of

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Practice. When they are we must endeavour to remove the Predisposition but this we find the most difficult part of our Art upon any Acc: of the Obstinacy of our Patients. Tonic Medicines are chiefly indicated such as Cold bathing - Steel Bath & Exercise. to this we must join the Spare Diet when a Plethora attends. - Predisposition to Syncope depending on Debility or Inanition requires the contrary Regimen. here all we can do is to remove the Debility & obviate the Occasional Causes.

(a) We must first endeavour to
find out their proximate cause.

The Syncope depending on primary affections of the heart require a very difficult treatment.(a) They are generally incurable, in all Cases except when it arises from a Hydrops Thoracis of which more hereafter. —

a, I have used the words Fibrarum Muscularum to show the Extent of this Order, as comprehending all Movable Fibres. —

This title is not very proper, but I could not find a better one without admitting a barbarous Cacocinesia which sounds too disagreeably.

- for the Definition of it see the Syllabus: a by inordinate motions I mean every Irregularity in the Order as well as Degree of motions: thus all the volunt.y motions are subject to the action of my will. if they move without the Consent of the will they are inordinate & the motions become morbid! in all our Actions are performed in a certain

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Degree of velocity. When this velocity is interrupted the Motions become in=ordinate. 2.nd There is a certain Lent in the Alternate Relaxation & Contraction of Muscles. if this is checked irregular Motions insue as in the Case of Lingultus. 3.rd There is a certain Direction in w.ch Muscles always move. if this is interrupted Contractions follow, as in the Case of Vomiting where the Muscular Fibres act from the right to the left Side instead of the left to the right. Bile flowing into the Stomach proceeds in like Manner whose conversion

of the Action of the Muscles of the Intestines
- the Miserere Mei is to be explained
in the same manner. But there
is 4th a State of Contraction different
for all these. There is a certain Mea-
sure in the Length of Contraction in-
somuch that every Contraction is
succeeded by a Relaxation, but the
Contraction is sometimes so great as
not to Alternator to yield to the
Force of Antagonist Muscles. The 3 first
Cases of Contraction are called by Pathol-
gists Convulsions. The 4th is called by
~~Spasm~~ them Spasm. This is only a

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gross Distinction. I shall endeavour
it to render it more comprehensive.
& clear.
The Scurvy depends upon ye Presence
of an excessive Quantity of some
saline extraneous Matter in ye
Blood. this arises from more saline
Matter being thrown in & less thrown
out than is natural. the remote
Cause of this is marine Diet, and
the Action of Cold. the Excreta however
are not less but rather greater than
in a healthy State. but the Excreta
are not by Stool or Urine. it must
therefore be by Perspiration wch is rather

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increased than diminished. how then does Cold produce the Leucoy? it contracts the Pores of the Skin, but does not prevent the necessary Quantity of Matter being thrown off from the of the Blood
Velocity being increased. but they are so contracted as to prevent the saline Matter passing that way. a Contraction then is only produced here, & not a Spasm. here is a Contraction somewhat different from Spasm in w: Alters but does not Obstruct the Secretions. But further, in the Hysteria we Often see Urina discharged

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in an encreased Quantity but destitute of saline Matter from a Contraction being induced upon the Urinary passages. this Case is exactly Analog: to the former, It is a strong Presumption of the Probability of w: we have advanced. there is in Other Cases an encreased Secretion of Liquors but destitute of their Original Qualities. & in the Water Brash of the Stomach it occurs. Sauvauges calls it the Cardialgia Spuratoria. it is very common in this Country. it depend on a Constriction

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of the extreme refuals of the Stomach &
an increased Influx of the Fluids to=
wards it. This Affection often occurs
in the Hypocondriacis & other Disea=
ses of the Alimentari Canal. It like=
wise happens sometimes in the Bowels;
altho it is more difficult to tell when
it takes place. I suspect it in all
cases of thin watery Dyarrhoeas.
~~Lucretius~~ But we have clear proofs
of its occurring in the Colon in the
Dysentery. here we see thin watery
stools discharged, when the more acrid
faculent matters are retained.

The general Indications we said were,

1st to avoid Occas: Causes.

2d to take of the Plethoric State of the System, of these two we have spoke.

3d to take of the Mobility of the Nervous System. this is to be done by 1st Antispasmodics

2 tonics.

1st: Antispasmodics among Medical writers are innumerable. we understand little of their Operation so that we can say little a priori, nor indeed

Epilepsy

can we a posteriori say Anything
from Experience. Much of their
success depends upon their being pre=
cisely adjusted to the time of the Disease.
the more powerful Antispasmodics do
service before a Fitt as well as during
the Spasm which prevails in a Fitt. but
these Virtues diminish by Repetition.
the nearer they are given to ye Spasm
or convulsive State the better. they must
be very powerful or they will do but
little service. I believe no Medicine

will be of use unless it will act as a Poison in certain Circumstances on the Constitution in Health. the most celebrated Antispasmodics are the Oleum Animale & Musk. the first is difficult to be procured, & when procured is soon spoiled by the Air. it is an efficacious Medicine. it has been known to prevent the Return of intermitt.g Fevers. I would therefore recommend it in the Epilepsy. the virtues of Musk are more uncertain. it is a strong Antispasmodic Lenitive

seldom obtained genuine or I believe
it would never fail of doing Service.
Valerian Peony &c are doubtful
remedies. I cannot recommend my
from my own Experience I refer
you to Authors for an Acc.t of them.
Opium is the most celebrated
Antispasmodic we are acquainted
with, but is condemned in Epilepsy
by all Authors except by Morgagni
& De Haen. the frequent use of Opium
by giving Occasion to Congestion in
the Brain often does Mischief. it

Moreover leaves an Irritability & Debility in the System. But Not=
withstanding this it is powerful in dimi=
nishing the Mobility of the Nervous
Power by checking its Influx into
the Muscles. Besides all Anti=
spasmodics act as Sedatives, & therefore
I think Opium may be tried w: Advan=
tage in the Epilepsy. I grant it may
have done Harm in those Cases where
it has not removed the Spasm.
Dr Stork tells us of his having
performed many Cures wth Physicians

they operate in the same way as Opium only that it keeps the Bowels open. the Cases related by De Haen & Morgagni appear rather to be Cases of Collapse than Epilepsy

Tonics these are Fear - Vegetable Astringents - Metallics - Cold Bathing.

It is difficult to measure the Degree of Fear to be used. I mention it to convince you that the Other Medicines act only on ye Nervous

System. it acts by inducing that collapse which gives more firmness & thus removes the Mobility of the nervous System. It must not be raised to Fever, but be of a more permanent nature. It is useful in convulsive Motion when the Sense is still entire.

Vegetable Tonics or Astringents.

Some of them are simply Astringents such as the Viscus Quercinum. Quercine its Reputation is owing more to Superstition than Experience.

Epilepsy

Never saw it do Service. the Peruvian Bark supercedes the necessity of Bleeding. this is chiefly useful in Cases of Nervous Mobility but it may be hurtful in the plethoric state as it may endanger a Hemorrhage or increased Inflam.: Diathesis. Blood drawn during the Fitt of Epilepsy always appears dissolved, so that upon this Acc.: we may be less cautious in exhibiting the Bark even where some Degree of Inflam.: Diathesis attends.

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Epilepsy

In Periodical Epilepsies it is more specially useful. if it does no service we must lay it aside or it will do Harm by increasing the Tone of the Stomach too much.

Metallic = tonics. are by far most powerful of any we have spoke of. I have heard of Tin, doing great service, as well as Lead. they are dangerous medicines, not have I ever dared to use them. the Preparations of Copper are chiefly employed in the Epilepsy. but unless they

do Lurin soon I always desist
from them. w: Preparations of
Copper are best? Vanswieten
speaks of One wch he keeps a Secret,
wch he says operates on ye whole
system without operating on the
stomach. However I have used
a substitute for it wch is combining
Copper wth a neutral Salt and
thus making the Sulphum Ammonia-
cum. I cannot say however that
it is preferable to the Blue Vitriol.
Cold Bathing. I have known

Epilepsy

This cure many Epilepsy. It takes
off the Mobility of the System. I
have knew a Gentleman who
was seized wth Convulsions upon
hearing of a Surgical Operation,
he relieved by cold Bathing y^e. He
could assist in performing ye most
bloody Operation in a short time after.
wards.

An Indication was to strengthen
the System. here all the Tonics
we spoke off are to be used,
as they are useful to remove
Debility as well as Mobility. I

shall only add here that a full Diet is sometimes necessary to strengthen the Patient. I know a Gentleman who was greatly relieved from an Epilepsy by laying aside his thin low Regimen, & gradually living upon a more full Diet.

There is a Remedy which does not come under any of the Indications we have laid down. viz changing the whole Habit of the System, such as the Air - Manner of Living - & every thing contrary to w: the Patient had been used to.

Convulsive Motions

We come now to treat of partial Convulsions. The Theory of them is the same as of Epilepsy. They depend on Reaction from Collapse ~~[illegible]~~ or Excitement of the Sensorium. in the last Case the Causes act more partially. They are no ways influenced or connected w th a Sympathy of Nerves. Motions are often apported, but are connected th w: Will or Propensity. There are further Corporical Affections in the Brain w: produce partial Affections. but these Affections

Cataplexive Motions

are seated near to the origin of the Nerves w:ch go to the convulsed parts & are not connected w:th the whole Sensorium. But Convulsions depend more generally upon the state of the parts convulsed. This leads me to speak of y:e Doctrine of Tension on w:ch Convulsions so much depend. The whole System is in a State of Tension. The simple Solids have their Tension ballanced w:th the State of their simple Contractility. The Muscles in like manner are

influenced in their Tension by the
Action of their Antagonists. the
Fulness of the Blood-vessels like-
wise contributes towards keeping up
the Tension of the System. the State
of the Brain is greatly connected
with the Tension of the System more
specially the Tension of ye Blood-
vessels. the Communications of this
Tension are carried on by the
Nerves of the Nerves. When all the
Causes of Tension act as they should
do there is a uniformity in all the

Motions of the Body. if the Ballance
in w: th Tension depend is destroyed
Mobility & irregular Actions follow.
2 Causes change the Tension of particu:
lar parts? 1: the Application of
Bodies extraneous to the nervous System.
- these are 1 Stimulants & 2 Sedatives.
they diminish the contractile Force
& increase it. the 1 viz: the Acids
have had a great Share in our Animal
Pathology, but there are much less
than those things w: th modifiate the Tension
of the System such as the Passions of
the Mind w: th operate directly on the

Brain. 2nd: Another Cause of unequal Tension is the unequal Distribution of the Blood which may act primarily on the Brain & afterward on every Other part of the Body. 3rd: There are particular parts of the Body on which the Tension of the Whole System depends such as the Alimentary Canal - & the System of the Uterus & Genitals in both Sexes which from their particular State influence the Tension of the Whole System. we shall speak more of this here after. the Female System requires at a particular Age that the venereal Appetite that

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Menstruation & Pregnancy should all take place. many Disorders flow from a want of them from the System being too highly or too lowly ballanced. But the State of ye Genetals is liable to great variety from Climate Diet Exercise & all w: wh: wise influence the Tension of the System. from this we may understand why Palsies Epilepsy & every irregular Phenomenon of the Nervous System may arise from the State of the Genetals. This Evacuation in the Genitals is confined from ye Age of 10 to 16. this is ye: Age in which

convulsive motions such as the Chorea Sancti vitæ & most of other convulsive Disorders happen. 19 out of 20 of them occur in that Interval of Life. I leave you to apply w: has been said to the particular Cases of Convulsions & shall proceed to the Cure.

Method of Cure.

The principal Remedy here is taking off the plethoric State. Dr Sydenham & van Swieten differ about Bleeding in the Chorea Sancti vitæ they are both right, & both in the wrong.

in Plethoric States it is useful but
in Cases of Debility it will do mis:
chief. I have generally found
this Disorder to require Blood:
letting in its first stage unless it
is bleeded wth paralytic affections. y^e
more considerable the Convulsions,
the more ~~and~~ necessary Bleeding
becomes. However I seldom repeat
the Bleeding, but enjoin low Diet
Cold Bathing the Bark & Other
Tonics. the Plethora here is seldom
so in Epilepsy attended wth Inflam^n

diathesis so that ye Bark may be given wth the utmost Safety.

of Spasmodic Disorders

Spasm is a durable State of Convulsion wch does not Alternate wth Relaxation. I cannot say w^t is the State of a Muscle when contracted. it consists in an increased Influx or Determination. it may depend on the Muscle's loosing its usual Balance wch makes it admit of unusual Influx.

But it sometimes depends on the Brain itself exerting itself in a more violent Manner than usual. Spasm I believe arises most generally from this Cause. There is often a violent & perpetual Excitement of the Brain wch does not admit of Alternation as in Convulsions, wch the Reason of this is I cannot pretend to say. But this notion of violent Excitement corresponds wch the Cure of Spasm wch is obtained only by strong Sedatives. the more strong the Spasm the more strong the Sedative Medicines must be. this you

will readily be applied to all the Cases of Tetanus Lock Jaw &c. you may compare this Theory with the Facts related concerning this Disease by Dr. Hillary & Dr. Chambers.

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I shall now go on to speak of the convulsive Motions of the Alimentary Canal. we shall begin with the Hysteria. how little is known of the Disease! even Dr. Whyt the best Author who has ever treated on this Subject attributes it either to vicid Matter or to a Sympathy

of the nerves. I shall attempt a new Theory of the Disease, & if I fail in establishing it I shall only fail where many mighty have been slain. The term Hysteria has been much confounded with Hypocondriasis & other nervous Disorders. I shall endeavour to distinguish it by its proximate Cause. It is chiefly seated in the Alimentary Canal & is attended wth a Lense of a Ball rising up to the Oesophagus. This is attended wth a Loss of Sense, & many other Symptoms of a like nature. The Globus

but Fever furnishes the best illus-
tration of it. I do not consider it
as an entire Spasm. it may be
understood from w^t we said of the
Survey. the extreme Refels are
under a tonic Contraction. it
~~was~~ removed by restoring the Action
of these extreme Refels by ye Medicines
we before spoke off. I did not chuse
to introduce this Distinction sooner
for fear of embarassing you when
I was treating of the proximate Cause
of Fevers.

All this tends to shew you that there is a Contraction distinct from any thing Authors have pointed out. I shall now return to our subject & shall adopt the common Division of Clonic & tonic Spasms. we include all irregular motions wch are not attended wth Pyrexia. we shall distinguish Spasms as they occur 1st in the volunt^y motions 2nd as they occur in the natural Functions 3rd as they occur in the Organs of Respiration & Vi^sion

Heart: I shall begin with the first as being more simple & as tending to explain those which follow.

Epilepsy.

This is ye most general Case of Convulsive Motion. it is the most difficult part of Animal Pathology. the suddenness of its Attacks, the Dreadful Nature & the Agitations attending it have always struck mankind w the Horror & Astonishment, & have Obliged them to refer it to a Supernatural power which the Superstition of Religion has contributed to keep up. many Difficulties will

ever in considering this Disease we
we shall not be able to resolve.
Imbecilicum however has done little
in curing this Disease. a Theory here
then can do no Harm. we shall there-
fore indulge it upon the present Occasion.
a Predisposition & occasional Causes. Often com-
mon in the Epilepsy. the Predisposition
is generally the most considerable. we
shall therefore begin by explaining it. I
suppose you all know the Action of Mus-
cles depends upon an Influx from the
Sensorium or a Propagation of Motion

we must therefore refer all variety in the Action of ye Muscles to the different states of ye Brain. wch is the ordinary state of the Brain? - Suppose an Elastic Fluid always present there. This I have elsewhere demonstrated. This is ye Foundation of a Communication of every part of ye System. This is always carried on thro ye Brain. Impressions are made on ye Extremities of sentient Nerves wch are carried to ye Brain from whence they are propagated to ye Organs of Motions. This Communication

is attended w: the reflex Sensation &
the Action of the Will. these Functions
take place only in the Brain. con-
nected with this there is a power which
gives a new Force w: Scale ye Action
of the Brain. But there two Cases to
be distinguish^d for this. 1 where Impressions
to produce Motions without the Interven-
tion of Will or reflex Sensation. this may
often happen from ye Consequence of Habit
But even here the Action of ye Brain
takes place w: is Analagous to ye Operation
of ye Will. 2: where we see Impressions which

do not seem to ~~[illegible]~~ produce
Actions in the Motatory Organs. But
these still excite the Action of ye Brain
But further, the State of ye Brain
consists in the different States of its
Excitement. the Other is sometimes
more accumulated, or more Mobile
than at Other times. the Vicissitudes
of Sleeping & waking sufficiently prove
this. I shall use ye words of Excitement
& Collapse, the One to explain increased
& the Other diminished Excitement. the
Brain then is like an Elastic Cord which
from Immediate returns to its natural

state. Impulsion I said was communicated thro ye Sensorium to ye Organs of Motions. This is done by the resilient reactive power of the Brain. It depends upon the reflex Sensation or ye action of ye Will. The Process of Excitement is always followed by Reaction & a Collapse. Collapse in like Manner produces Excitement & Influx into the Nerves of Motions. all Motions of ye System are performed wth a determined Velocity, & every Volition is determined to certain Motions only, & attends to but One at One.

if the Will is hurried Convulsions &
~~motion~~ Irregularity follow, & hence we trace
irregular & convulsive Motions. all
violent & sudden Reaction then must
be involuntary & irregular. it is no
matter whether this Reaction is proc:
ced by Excitement or Collapse. Why
are these Irregular Motions determined
to ye Organs of Motions & not of Sense?
the Organs of Sense are blind & extreme:
ly & admit of no increased Afflux, but
the Organs of Motions do, & hence the
Revibrations of ye Brain are determined

to them. this may explain what
we said on the Head of Palsy of Sense
being a passive & motion an Active
function of the Brain. a greater
degree of Excitement is necessary to
motion, but Sense may continued
without any increased Excitement.
But Epilepsy may depend on Collapse
Haemorrhages induce Epilepsy in
the moribund Animals, & these we
know induce a Collapse. the same
causes wch produce Syncope in some people
will produce Epilepsy in Others. when the
Collapse is very sudden & there is little

(4) the more sudden & violent the Impressions are the more of the Brain is excited, & hence the Reaction of the Brain will be greater.

Resolution, it produces ~~syncope~~ Epilepsy when it is more gradual & attended with more Reaction it induces only ~~Epilepsy~~ Syncope. sudden & violent Excitement in this manner sometimes induces Epilepsy as well as Syncope. All the Occasional Causes of Epilepsy then Operate either by bringing an Excitement or Collapse of the Brain

Let us now return to speak of the Predisposition to Epilepsy. it depends upon a certain Mobility of the Brain which makes it more easily excited & more

(2) the Definition of Mobility consists in a Matter ~~has~~ having greater Elasticity that is proportional to the Force of Cohesion. —

subject to Oscillations. I explained
before on what this Mobility depends
under the Head of Syncope (a). Nothing is
more evident than that ye plethoric
state of the Arteries predisposes
to the Epilepsy. This Mobility becomes
habitual. the Oftener it is excited the
easier it is excited. This depends on
Repetition giving greater facility of Motion.
Large Oscillations when once excited
in the Brain are easily renewed. This is
the Reason why convulsive Motions are
so difficult of Cure even after the Origi-
nal Cause of them is evanished. —

but there are other Causes of a Mobility of the Brain, such as Stimuli applied to it. then we know indue Convulsions. we see it every day. now there may be many Irritations in the Brain wch are not acquainted with wch are permanent there, altho' ye Convulsions produced by them are not. for this depends upon ye encreased Oscillations being followed by a Collapse. Collapse likewise indues an encreased Resilition & an Excitement ye Brain. this Collapse often is to such a Degree as to end in Apoplexy, & some times

in Death, but before this it Alternated with Excitement several times. Further, the Stimuli on the Brain from Bony Excrescences or Other Tumors may be too small to induce perpetual Convulsions or the Brain may be too much used to it, to be much irritated by it. The Turgescence of the Brain that these Bony Excrescences induce is carried off by means of the Epileptic Fitt, & on this depends the Intermissions we so often Observe in Epilepsies even while the Exciting cause continues. Turgescence may Operate by encreasing the Mobility of

the Brain, this we infer from such slight Engorgements inducing it. a Paleness of the Arterial System may be sufficient, especially when confined to the Brain it may act as a Stimulus on the whole System. this Stimulus is a Stimulus of Distention. every Degree of Inflammat.n is a Stimulus of this kind. Epilepsy very commonly succeeds Phrenitis upon this Account. There may a Phrenitis without Delirium. I dont intend to tell the Cause of this. But we often see it, & it is this species of Phrenitis w.ch mostly ends in Epilepsy

Tubercles & Schirrosities are often found in the Brain of Epileptic patients which act neither by their Quantity or Magnitude but by straitening the Size of the Brain & thus favouring Inflammn: Congestions & Turgescences there: Other Causes may cooperate in encreasing ye Tension of ye System such as ye State of the Genitals. This is evident in Hysteria w^ch: is often accompanied w^th: Epilepsy.

What are ye evident & known Causes of Epilepsy Occasional & Predispo-sent? — It is difficult to distin-guish between Occasional & predisposing Causes, but we shall take the Ordin-ary Division of them.

We shall 1st consider the Occasional Causes. Dr. Boerhaave has given us a large Enumeration of them, but dont distinguish them as they operate by Excitement or Collapse, nor from ye Predisposing Causes.

Those wch operate by Excite-ment operate 1st on ye Brain 2d & On

other parts. 1st those w^h operation of the brain are wounds Contusions & Extravasations - pungent Ossifications.

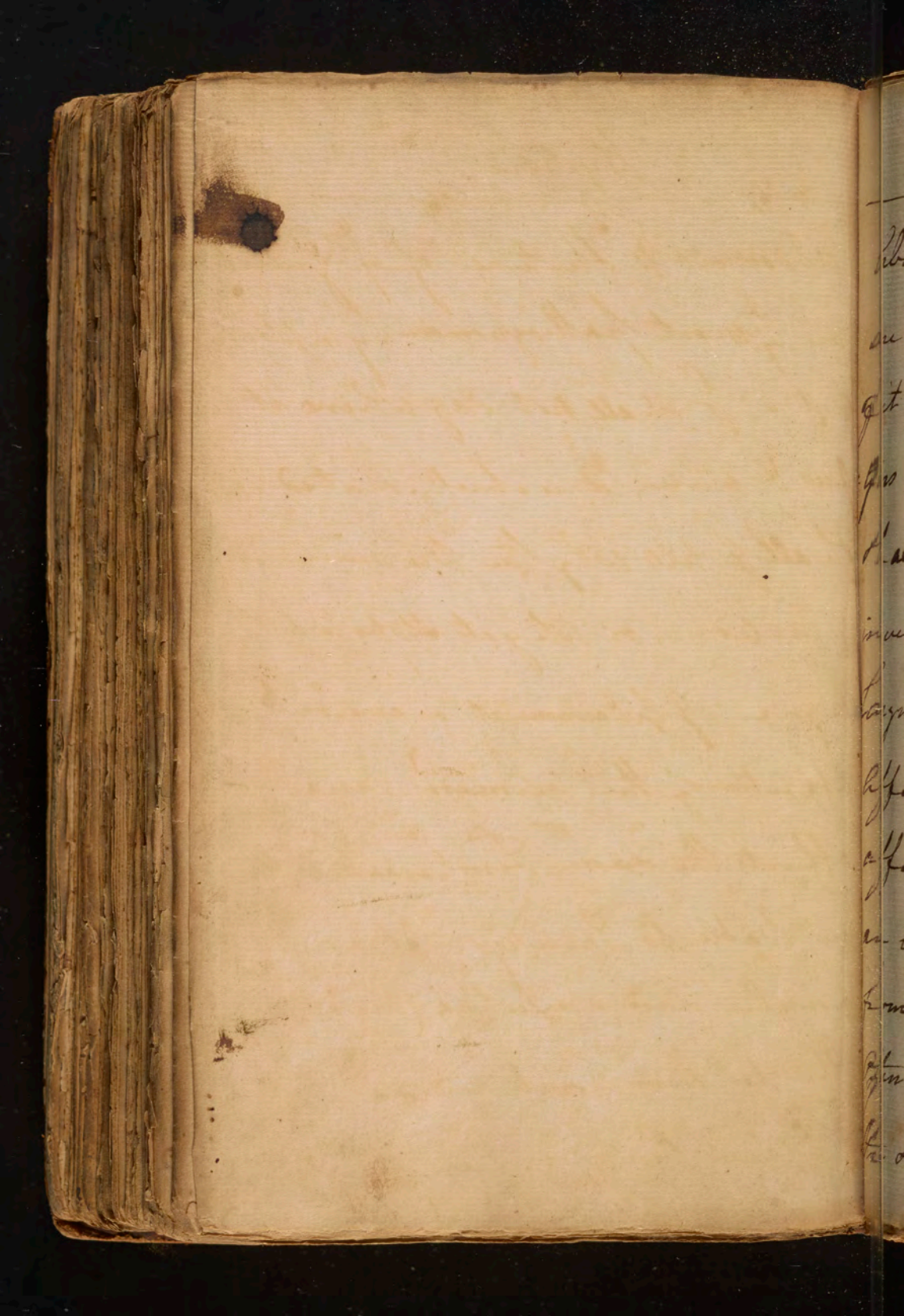
- the variety in the Operation of these is owing ~~to~~ to the nature of the stimulus & the part of the Brain they affect than to a Predisposition of the Patient.

2nd Chemical Stimuli Operate on the Brain. we often find Abscesses in the Brains of Epileptic Patients. do they operate by their Acrimony? they are always preceded by inflam^n

or encreased Impetus to wch: I would rather attribute the Epilepsy than to ye Acrimony of ye Abscesses, at least ye Cases are often doubtful — The Epilepsy mostly continues a long while before the Abscesses are formed. —

3d: Mental Stimuli such as Joy & Anger operate on ye Brain. — They are attended wth: Reflex Sensation wch: gives encreased Excitement. Pain & Pleasure I dont come in here. The 1st belongs to ye Other part of the System. The 2nd is mixed

It is attended by w: Excitement & Collapse
- as a Proof of y^e Epilepsy depending
rather upon Inflammat: or than
Abscess See Lieutaud, part III
Cases — 272
188. 173. 236, 243. 280 301 481. 528
of his Historia Physico-Anatomica



Abdominis & Stricture of ye Gullet are ye most pathognomonic Symptoms of it. I shall not say where it begins & where it is chiefly seated, nor shall I tell why the motion is inverted, or why it stops at the Larynx. I presume it a convulsive affection of the Alimen: Canal. it affects the same Temperaments that are liable to Epilepsy. it arises from the same exciting Causes. we often see them combined together in the same Persons. they are in my

Opinion induced by a like Affection of the Cerebellum. They are sometimes entirely seperate, & the Muscles of the Aliment: Canal alone are affected. But why are these Muscles primarily affected? ye Epilepsy happens chiefly in Children. The Hysteria seldom comes on till Puberty. The Hysteria then is connected: the Changes induced upon ye System about ye period of Life. These Changes consists chiefly in the Menstrual Flux. This we prove from its coming

on during ye time of Menstruation or being induced by ye Menses being checked. It is further connected w^th: the State of the Genitals particularly w^th: the Nymphomania insomuch that the Hysteria is often nothingelse but a venereal Paroxism It is to be terminated only by ye Injoyment of that Passion. Unmarried & barren women are upon this account more subject to ye Diseases than Other People. The Hysteria exquisita is then truely & strictly a Uterine

affection. But this leads us back again to our Question how does ye Uterus bring ye Muscles of the Abdomen? Canal into Sympathy? we might answer here that it may depend upon ye Tension or Ballance of the System being destroyed but this is not sufficient or men would be equally subject to the Hysteria. The Stomach & Uterus are nearly connected w: each other. This we see in the Chlorosis & Fluor Albus. This depends upon a peculiar Nervous Confor

mation of the Alimen.ty Canal wch con-
nects it however wth every Other part
of the System as well as y the Uterus.
— we must seek then a still
further Connection wch we shall find
to consist in the Sanguiferous
System. When y the Blood is determi-
ned down y the Aorta to evolve y
Uterus, it is likewise determined
more copiously than usual to the
Alimentary Canal in such a man-
ner as to encrease the Irritability
of those parts. The Blood is moreover

from this determined life towards the Brain & hence ye Predisposition to Epilepsy. an Obstruction then you will readily see in ye Uterus determing ye Blood more copiously into ye Alimentary Canal & hence the Phaenomena of Hysteria. But why are not ye Other Abdominal Viscera in like manner affected? they are, but as they are not provided w: such Muscular Fibres as ye Intestines are, they cannot exhibit the Phaenomena ye Alimentary Canal does. ~~they do ex-~~ exhibit

many Phenomena of increased Determinat.n of Blood towards them. y.e Kidneys in particular are always greatly affected in the Hysteria. the Reason why the Alimentary Canal is more affected than y.e Kidneys altho' its Arteries are less is owing to its being capable of greater Dilatation than than y.e Kidneys. this explains the Predisposition to y.e convulsive Affections in the Hysteria. the exciting Causes of Hysteria operate on y.e Brain such as Passions of y.e Mind & peculiar Odors. they all operate in y.e same way as they

do in Epilepsy either by exciting or inducing a Collapse in ye Brain.

— the Hysteria Pain we have been speaking off depends upon a plethoric state. It is to be cured by Evacuations & Abstinence. I have found them of the utmost Service since I have had this view of this Disease, while I have found Antispasmodics & Tonics do little Service more than relieving a Paroxism. I shall now speak of the Symptoms connected wth Hysteria — It gives a great Mobility to ye whole Nervous System wch will easily explain

all the nervous Phenomena we Observed in the Hysteria. all those nervous Affections wch occur in plethoric Habits, or between the Ages of 16 & 36, or that appear to be connected wth the State of the Genitals or Mamas properly belong to the Hysteria altho they do not appear in ye Alimentary Canal, & are to be treated like the Hysteria. But other Circumstances characterise the Hysteria. 1: vis ye Hysteria gives a mobility to ye nervous System wch is increased by Repetition & hence the Disease may begin when ye Predisposition

is removed. This species of Hysteria requires tonics & Antispasmodics. Evacuations here do mischief. 2nd: The Menstrual Molimina are often interrupted from causes we can't explain. here the System instead of becoming plethoric falls into a Chlorosis & Ataxia w: ch from y Defect of red Blood goes on encreasing. The System in this case labours under great Mobility. here Tonics & Chalybeates are necessary. 3rd: The frequent Repetition of Hysteric Fits joind w: the Indulgence of y venereal Appetite w: first induced them, Often

Hysteria

bring on a Menorragia - Leucorrhoea
&c. in this Case the Alimentary
Canal is affected wth torpor - Stasis
& Spasm wth give Occasion to Crudities
Acidity - Flatulency &c. shall we
call this the Hysteria? no - it
has been called by Physicians the
Hypocondriasis. we do then
prove to be of this Dise, but it
must be on in a curs way, as
the Subj abounds wth Dif. the
Hipo
is a Dis of the Alim Canal
wh Com wth the wh by you
are well acquainted with! when this

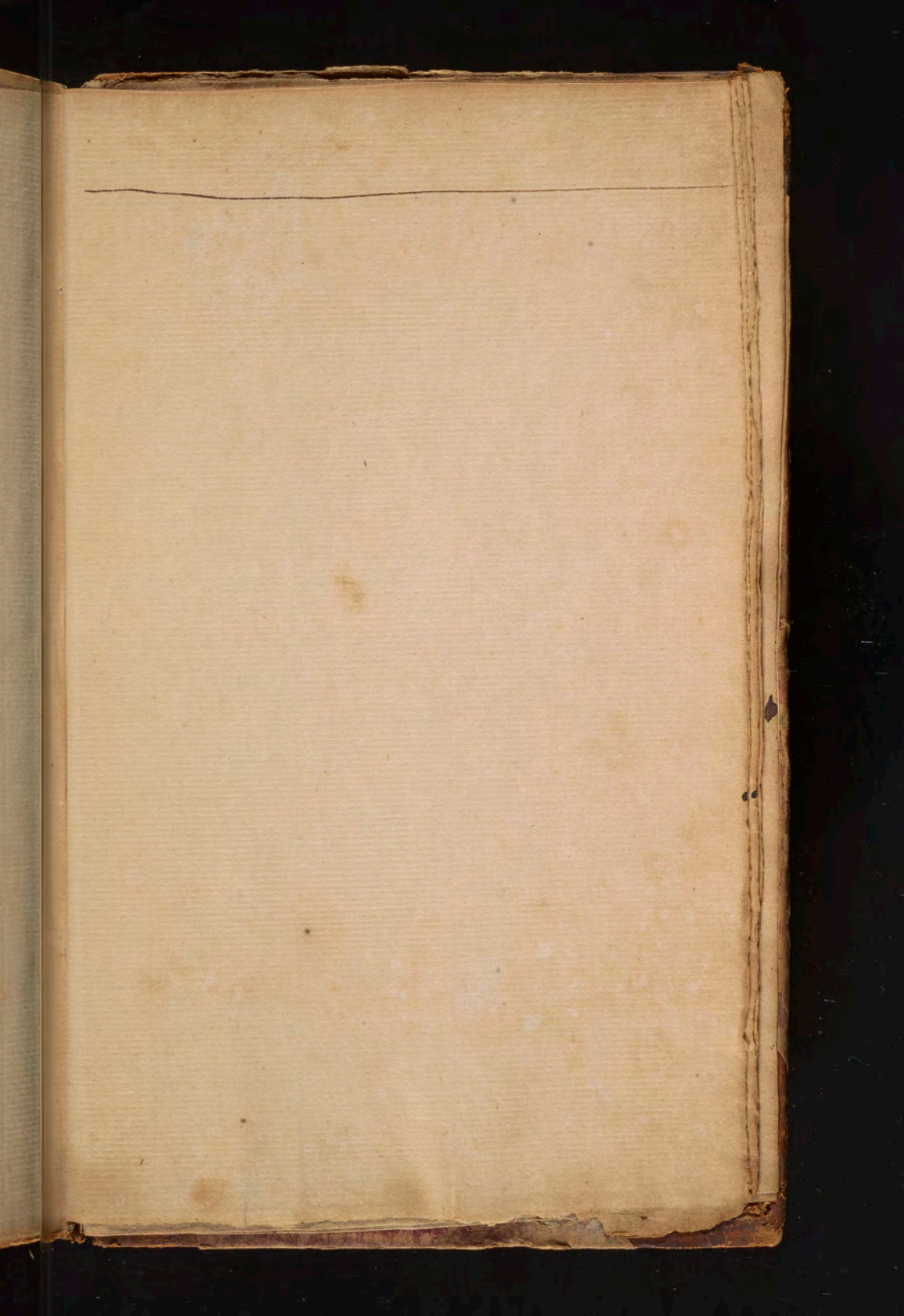
Anⁿ: it is dif to dis be the
Idio & symp of of
the Alim Canal. the last of
pass into the first as in the Hysteria
in that they may continue after
ter the last are entirely removed. the
Headache of arises from ye st but
I have seen Dis of ye st to
arise from of the Head. w^t
is to be done here? - But fur
off of the stom often Atte
wth other coat in such a
man as it to make it impos to
tell w^h is the prim Disease. you
see from this how dif it is to tell

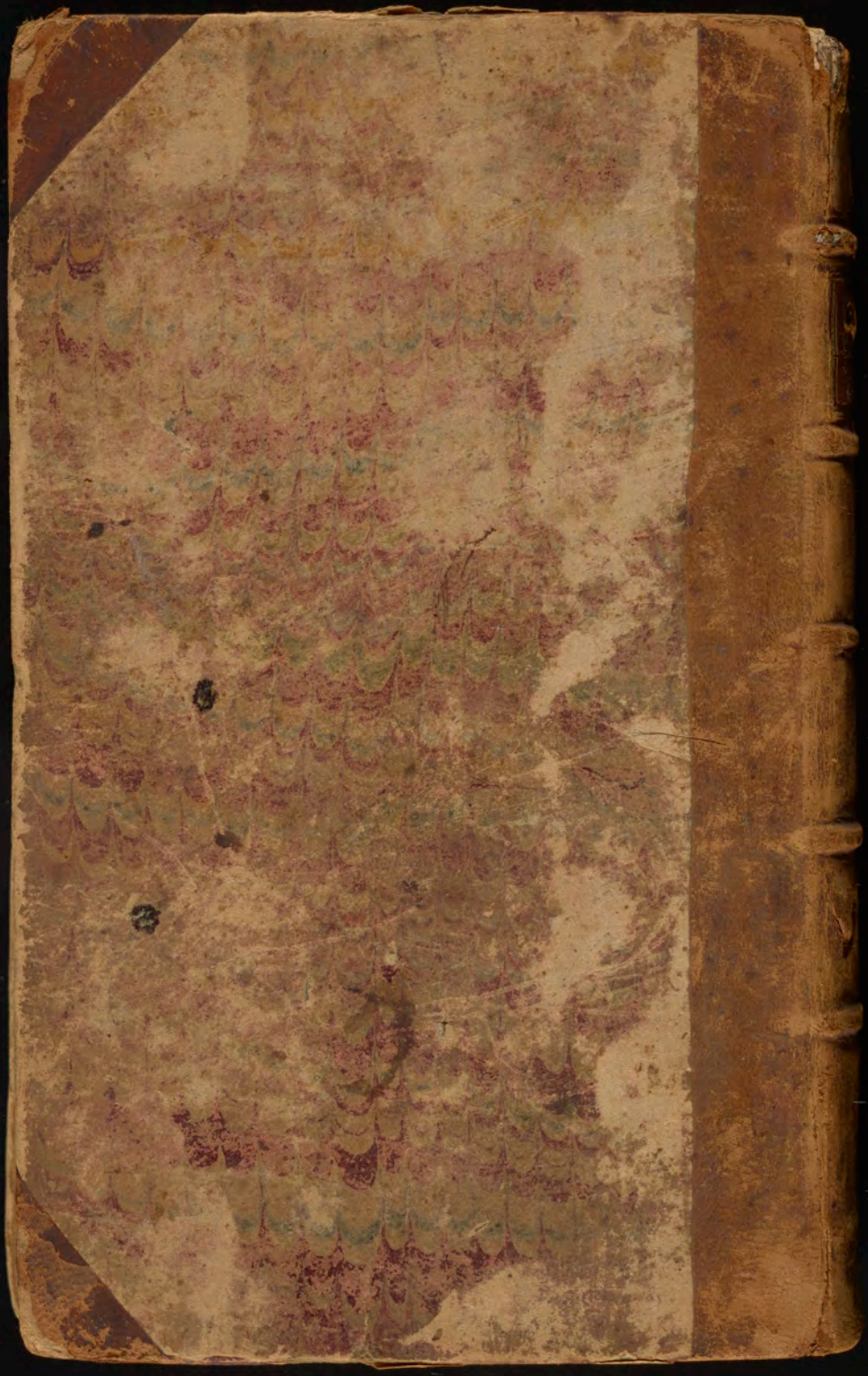
w: Aff of the Ch Can are
Jdi & what Symptomatic. It is
improf to rem these Difficulties, &
Physicians have long groaned under them.
gre Cough has arisen from not
disting gen from part
Mobility, and from uni Dis
which dep upon a Same Predisposition,
together. a Dis of the Mind such
as Deb Imbe &c are gen
made Chare Sym of this
Disease, but these Aff are in
many Diseases that are no way conna
w: the Ch inventa: Canal. & we of see
Aff of the Stom the worst any Life

of the Mind. I shall con my Obs
on this Dis by say th
there are 4 Dis to lep
out in this Disease: from ye Hysteria,

2nd from the Melan wch is ho
by a hec Temper of Body
of Mind. this is rath a Di
than a genuine Hypocond.
3rd ye Vasania may arise into a com:
Mania, but the more imper
vasan or Man or alw con
wth Affections of the Alimentary Canal.
here y^e Ob of Mind must go out

4: the proper Affections of ye Alimentary
Canal no ways connex with Affs
of Mind.



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